

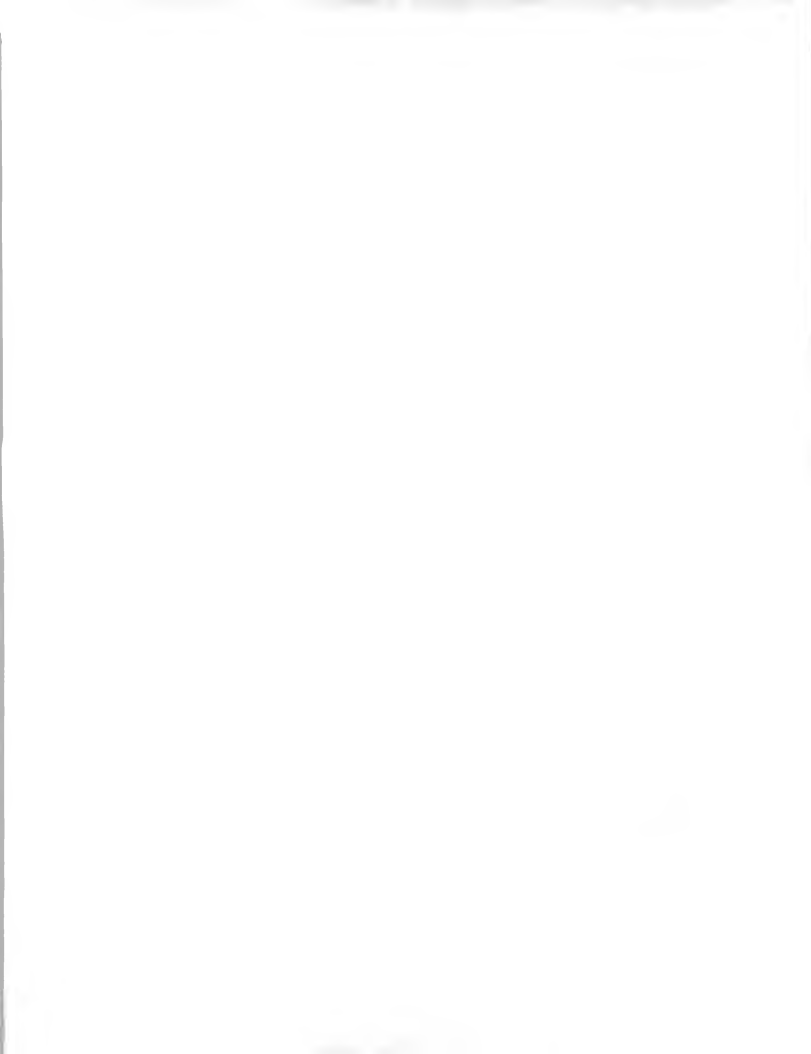
GRAPHICS INDUSTRY
FUTURE SERVICE REQUIREMENTS
IN EUROPE

A Study for

SCITEX

SEPTEMBER 1987

INPUT



GRAPHICS INDUSTRY
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A Study for SCITEX

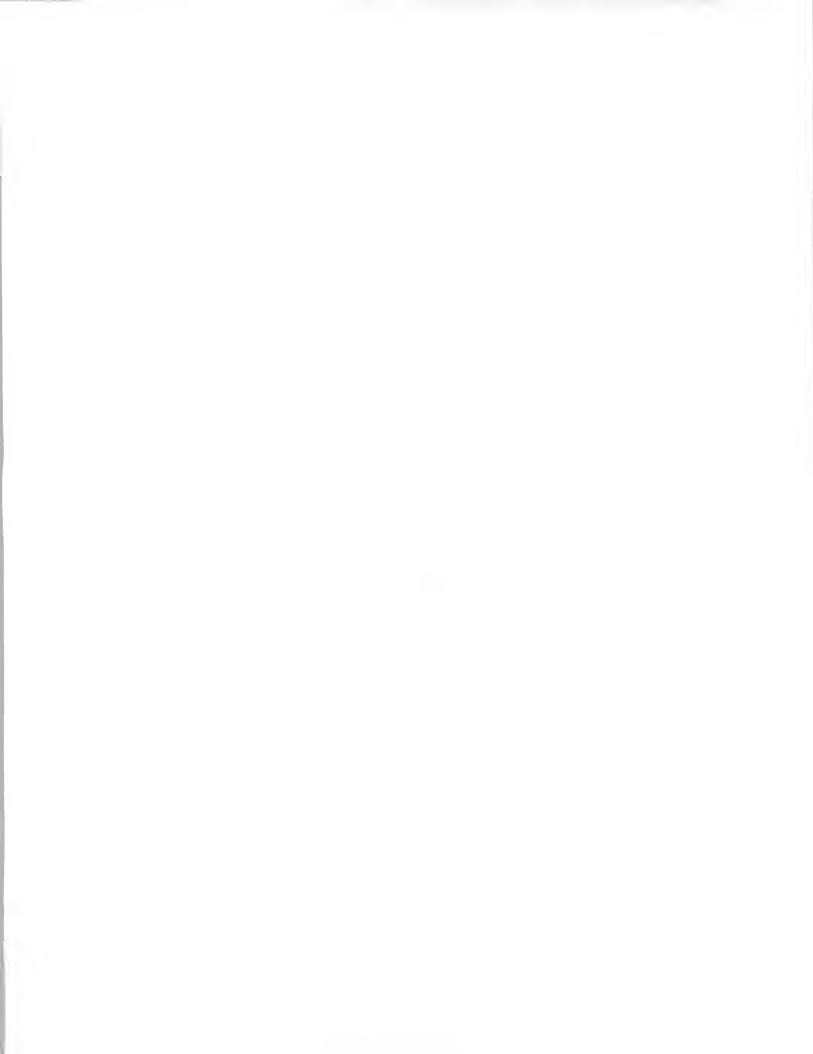
ABSTRACT

This report contains the results of research carried out by INPUT on behalf of Scitex in the first half of 1987.

The report examines the perceptions of maintenance/service of some 126 companies using scanners and composition systems for the support of the graphics industry in Europe and presents an analysis of the data with subsequent conclusions of interpretation.

Both problem and opportunity areas are identified by type of service and by country, and recommendations are made as to how Scitex can address the whole field of maintenance and service in the countries surveyed.

This report contains 164 pages, including 88 exhibits.



GRAPHICS INDUSTRY FUTURE SERVICE REQUIREMENTS IN EUROPE

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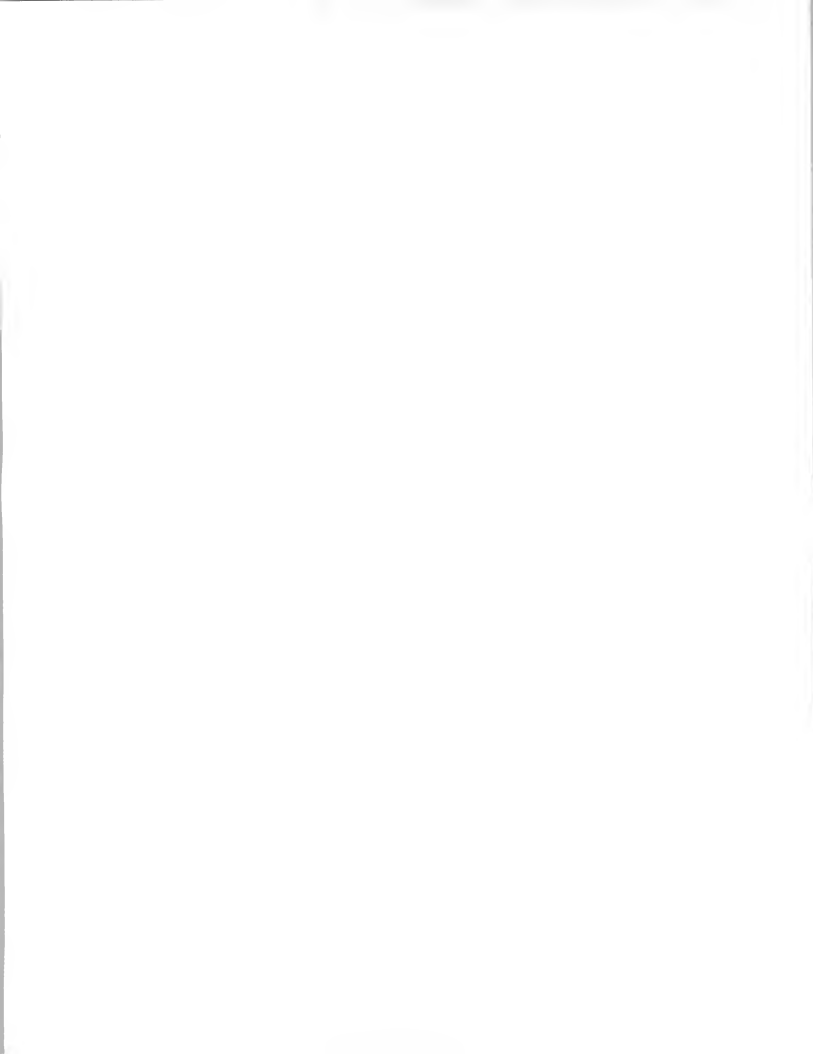
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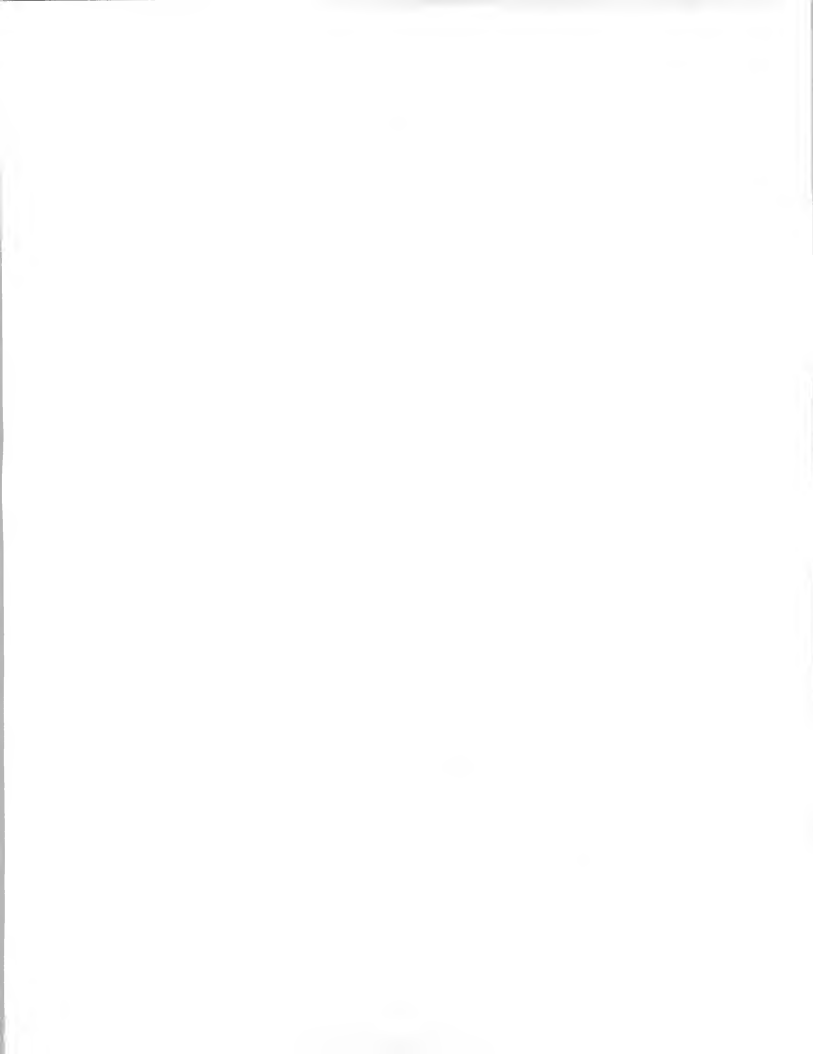
GRAPHICS INDUSTRY FUTURE SERVICE REQUIREMENTS IN EUROPE

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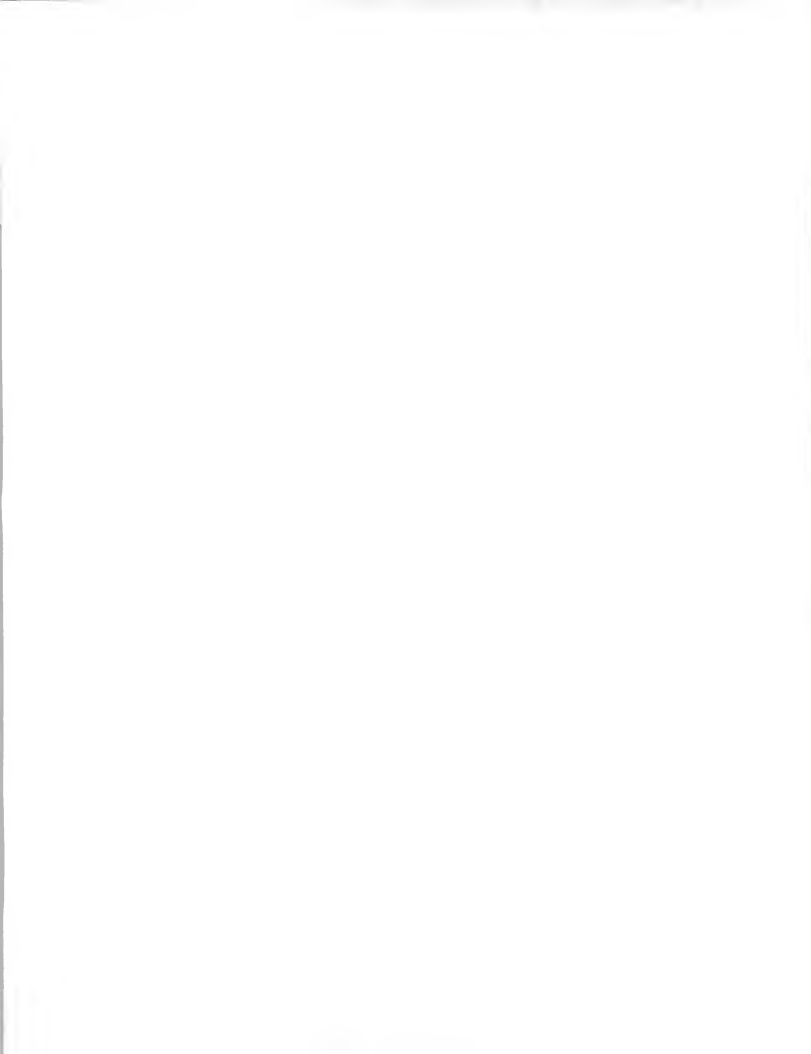
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CHAPTER 1 - INTRODUCTION

I INTRODUCTION

A. PURPOSE AND SCOPE OF REPORT

- This report gives the results of interviews with customers currently using scanning and page make-up machines from Hell, Crosfield, Dainippon, and Scitex.
- The questionnaire was devised by INPUT in collaboration with Scitex, and the customers were interviewed either face-to-face or by telephone.
- The overall aim of the study is to analyse the current service offerings and then to formulate future service needs in the countries surveyed.
- The market base comprises customers in the following countries:
 - Austria.
 - Belgium.
 - France.
 - Germany.
 - Holland.

- Italy.
 - Switzerland.
 - U.K.
- Exhibit I-1 shows the sample size and distribution in each country. The total sample size was 134.
 - The breakdown by country seeks to illustrate or highlight cultural or market differences so that future policy in these separate areas can be evaluated and services specific to any national requirement formulated.
 - Additionally, the data is arranged by maker so that:
 - An overall impression of that supplier can be obtained.
 - Any performance specific to individual countries can be identified and evaluated.

B. METHODOLOGY

- The data for this study was collected and analysed by INPUT during the first half of 1987.
- The data was then sorted and analysed at INPUT and the results tabulated and examined for interpretation.
- Where necessary, and appropriate, customer comment was translated and/or amalgamated in order to give a more coherent picture.

EXHIBIT I-1

SAMPLE SIZE AND DISTRIBUTION

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	4	2	-
Belgium	5	-	-
France	19	13	-
Germany	22	8	2
Holland	4	5	-
Italy	7	6	1
Switzerland	2	3	-
United Kingdom	8	18	3
Totals	71	55	6



- Dainippon customers formed a very small sample, and care should be taken when comparing the data with that of Hell and Crosfield. Where appropriate, a figure for Sampled Standard Deviation is included as an indicator to the limits of accuracy.

C. REPORT STRUCTURE

- The report comprises three main parts for ease of reference and reading:
 - The Executive Overview, giving a concise summary (Chapter II).
 - The body of the report, giving detail and interpretation (Chapters III through XI).
 - The Summary and Recommendations, giving a review and consolidation of the purpose and subsequent interpretation.

D. REPORT SYNOPSIS

- Chapter III covers the business environment, including the types of user specialisation, the overall costs of maintenance, and the installation values.
- Chapter IV covers the installed base, with typical current machines, installation dates for the current base, and the potential market for upgrades and changes.
- Chapter V covers warranty and maintenance agreements (contracts), including lengths of warranty and maintenance contract, contract terms and conditions, service spares, charges for movement of equipment, limits on service calls, discounts, and payments.

- Chapter VI gives the figures on maintenance coverage and response time, broken down into weekly and weekend cover, number of hours covered, and response times by supplier and country.
- Chapter VII covers the overall hardware, software, and application support by country and supplier.
- Chapter VIII deals with software service, specifically covering agreements, updates, telephone service, and times to respond.
- Chapter IX covers customer satisfaction over 12 key attributes and ranks the four suppliers in each. In addition, the suppliers' strengths and customer perceived weaknesses are displayed together with customer suggestions for improvement.
- Chapter X gives the country response to four additional services suggested by Scitex--assistance and personal section, systems planning and management, post-installation training, and evaluation of system productivity.
- Chapter XI details the conclusions and gives the consequent INPUT recommendations.
- Chapter XII is a presentation summary giving the main points from what the customer expects, product opportunities, market opportunities, and opportunities by country.



CHAPTER II - EXECUTIVE OVERVIEW

II EXECUTIVE OVERVIEW

- This Executive Overview is designed in a presentation format to:
 - Help the busy reader quickly review key findings.
 - Provide a ready-to-go executive presentation, complete with script and visual aids.
- Key points of the entire report are summarized in Exhibits II-1 through II-14. On the left-hand page facing each exhibit is a script explaining the exhibit's contents.

A. MAINTENANCE AGREEMENTS

- Only 67% of customers were recorded as having a current maintenance agreement, which gives a lot of scope for further sales--given the right product.
- Only 19% of these signed a contract at the time of equipment purchase, which is the best time to get customer commitment. Hence, Scitex should review its point-of-sale strategy to ensure that the sale of service is given a high priority.
- About 30% signed the contract upon expiration of warranty, and a further 5% or so at the end of one year. See Exhibit II-1 for a table of contract take-up.
- About 70% of these contracts covered preventive maintenance, and this can be a good revenue earner with little extra capital outlay required. A combination of reliable equipment and a contract for preventive maintenance can give good profit as well as good credibility (for reliable equipment) in the marketplace.
- From the abridged figures in Exhibit II-1, it can be seen that users also are concerned about cash flow, with the majority paying monthly. If Scitex itself wishes to optimize on cash flow it is recommended that it generate a discounted price list for prepayment, based on the expected inflation rate in each country.
- To compete in this market it is evident that warranty will need to be offered for a span of about 12 months unless some other service can be 'traded' in its place.
- As with the computer industry, it may be possible to sell a reduced price, first-year maintenance contract to give a better cash flow and then revert to full price at the expiration of the contract.

EXHIBIT II-1

USERS WITH MAINTENANCE AGREEMENTS

	PERCENT OF USERS		
	HELL	CROSFIELD	DAINIPPON
With Agreement	63	71	67
Signed at Purchase	23	18	17
At End of Warranty	32	27	17
Including Preventative Maintenance	65	76	67
Payment:			
30 Days/Monthly	35	50	-
Quarterly	43	30	-
Annually	2	3	-



B. PARTS, CALLS, AND MOVEMENT

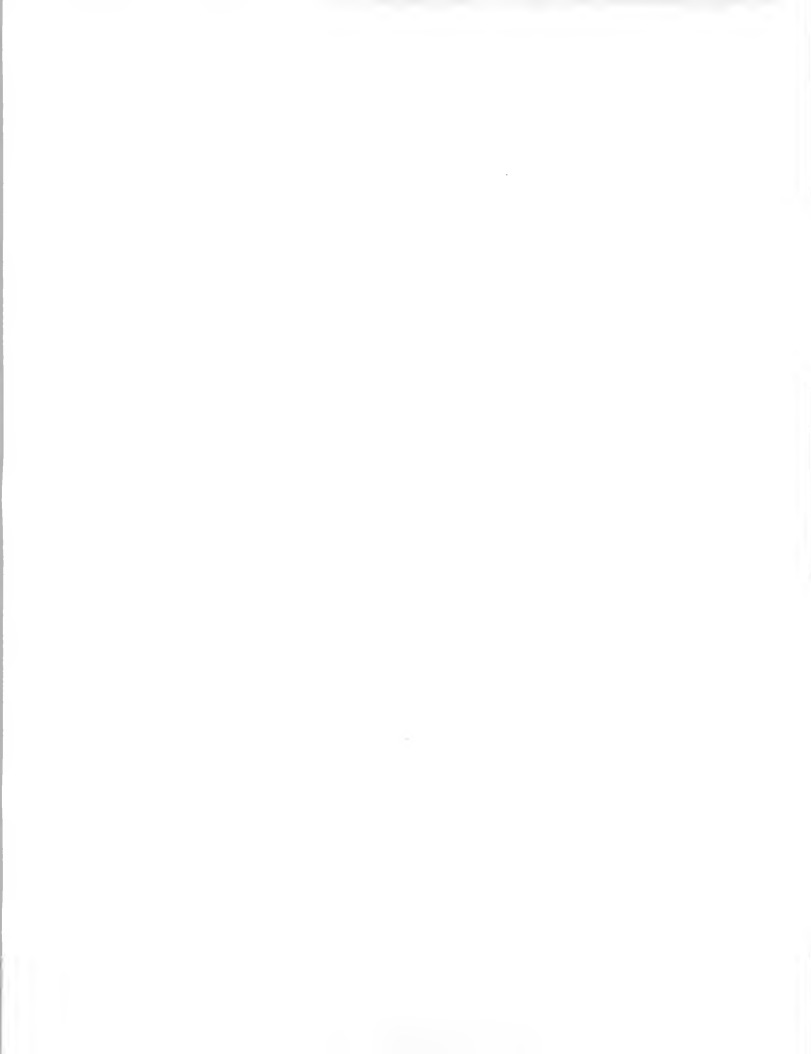
- Exhibit II-2 shows the percentage of customers with free replacement parts under the terms of the maintenance agreement and, conversely, those without.
- The more unreliable the equipment, the more sensitive customers are going to be about paying for spares; hence, reliable equipment gives at least three advantages:
 - Good credibility in the marketplace.
 - Lower warranty cost.
 - Better ability to charge for spares.
- Otherwise, the inclusion of free spares in the maintenance agreement can be used as a bargaining counter at the time of equipment sale.
- Most customers expect to pay for expensive spare items, such as disk drives, once out of warranty, and it is recommended that Scitex encourage its customers to continue in these expectations.
- Some 77% of users expect the supplier to give unlimited free service calls under the contract, and INPUT believes that these expectations will continue. This is another good reason to ensure that the original equipment has a high MTBF.
- Although only some 45% of users receive a bill for the movement of their systems, it is generally felt that customers expect to pay for this, and it is recommended that Scitex make such a charge.

EXHIBIT II-2

PARTS, CALLS, AND MOVEMENT
(Percentage of Customers with Stated Service)

	EQUIPMENT	
	HELL	CROSFIELD
All Parts Free	24	39
Limitations*	18	13
Wear and Tear Extra	6	9
Limits on Calls	3	2
Movement Charge	41	49

*Disk drives, etc.



C. OVERALL COVERAGE

- In Exhibit II-3 a comparison is made between the figures for customers as a whole as against those with current contracts in the areas of hardware, software, and applications support.
- There is a 16% opportunity to provide hardware and software services to users without current contracts, and a very large opportunity to sell and support applications.
- There are, however, significant country differences, and these are dealt with in Chapter VII.
- Software support is dealt with specifically in Chapter IX, but it is worth noting that a high proportion of the support is given as a telephone service, and, in the view of INPUT, the trend will be more and more this way by reason of:
 - Cheaper to move words than bodies.
 - An increase in in-built diagnostics.
 - An increase in remote diagnostics.
- Hence, it is recommended that Scitex consider the above points in both its machine and its maintenance strategies.

EXHIBIT II-3

OVERALL SUPPORT FOR HARDWARE, SOFTWARE,
AND APPLICATIONS
(Percent with Stated Service)

	SECTOR		
	HARDWARE	SOFTWARE	APPLICATIONS
Those with Contracts	99	92	60
Among All Customers	82	76	53

Percentage having stated service.



D. COST OF MAINTENANCE

- The maintenance cost expressed as a percentage of the system cost being serviced ranged from 2% to 12% per annum (see Exhibit II-4).
- Both Hell and Crosfield charge a wide range of prices and, within the limits of statistical error, have very similar profiles.
- It appears, from the wide range of annual charges, that maintenance costs are a direct bargaining counter at the time of selling the new equipment, even allowing for the size of installation.

EXHIBIT II-4

COST OF MAINTENANCE PER ANNUM

Hell	5.8% of system cost
Crosfield	6.1% of system cost
Range of Costs:	
Hell	2% to 12%
Crosfield	2% to 10%

E. CONTRACT TERMS AND CONDITIONS

- From the more frequent replies it is evident that the users were not too familiar with the terms and conditions of the contract; some of the prime clauses are shown in Exhibit II-5.
- With an apparent lack of knowledge or understanding of terms and conditions among the users, Scitex should try to ensure that it has a minimum set which is fair to the customer but favourable to Scitex.
- Scitex should also seriously consider excluding consequential damages, including force majeure, in order to protect its business interests.
- In this context it should be noted that very few Hell customers have managed to get downtime penalty clauses, as against Crosfield customers with over three times more. These type of clauses are to be avoided as they have the same effect as slowly ticking 'time bombs'.

EXHIBIT II-5

CONTRACT TERMS AND CONDITIONS

TERMS	EQUIPMENT	
	HELL	CROSFIELD
Modifications	4 4	6 2
Confidentiality	4 6	5 9
Additions to System	4 0	3 8
Penalty Clause	6	2 0

Percentage of Customers Stating that these clauses are in their contracts.



F. MAINTENANCE COVERAGE AND RESPONSE TIMES

- From the customer responses shown in Exhibit II-6, it can be seen that the minimum cover time has been extended to 16 hours on average, and it is considered extremely likely that two- and three-shift systems will become the norm for expensive installations.
 - This can be avoided in part by the in-building of diagnostic routines for the customer's own use out of hours and the provision, at cost, of a minimum set of wear and tear spares.
- It should also be noted that significant coverage is also required over the weekend.
- Response times are generally better than expected, but this may be due to a depression of the expectation levels due to past poor performance. The prime task must still be to get the customer up and running.

EXHIBIT II-6

COVERAGE AND RESPONSE EXPECTED

COVERAGE	HELL	CROSFIELD	DAINIPPON
Monday-Friday (Hours)	1 6	1 8	1 6
Saturday (Percent)	6 3	6 1	6 7
Sunday (Percent)	5 0	6 1	6 7

	HELL	CROSFIELD	DAINIPPON
Response (Hours)	5 . 4	6 . 4	4 . 9
Repair Time (Hours)	12 . 7	9 . 1	5 . 5



G. SPECIFIC TOP AND BOTTOM COUNTRY RESPONSE TIMES

- Translated into the country context, as shown in Exhibit II-7, it can be seen that different countries require or expect quite different levels of response time. Swiss users, for instance, expect a three times faster response than German users, and Scitex will be able to use these performance requirements to either:
 - Tailor the service to the country and hence reduce overall cost.
 - Use better competitive responses in specific countries to capture market share.

EXHIBIT II-7

**RESPONSE TIMES BY COUNTRY
(Top and Bottom Values)**

COUNTRY	RESPONSE TIME (Hours)
Switzerland	3.0
United Kingdom	3.6
Italy	6.6
Germany	9.8



H. CUSTOMER SATISFACTION

- Within the limits of error, there is very little difference between Hell and Crosfield in any of the key areas (see Exhibit II-8).
- Support of applications software is one of the lowest in both cases, but Dainippon scores high. This supports the view that there is a key market opportunity in this area.
- Service engineer's attitude scores high with both the main companies, and it is now quite general for major service operations to include strong training in interpersonal relationships. It is recommended that Scitex keep this as a high priority.



EXHIBIT II-8

CUSTOMER SATISFACTION
(Points Out of 100)

	HELL	CROSFIELD	DAINIPPON
Average Scores	74	69	79
Worst Score			
Application Support	64	62	
Engineer Competence			68
Best Score			
Engineer Attitude	82	76	
Telephone Response			72



I. SUPPLIER STRENGTHS

- When considering customer/user views it should be remembered that users generally look for certain prime machine and service attributes, either at the time of new purchase or during a period of bad experiences with a current machine; therefore, the ones that come out with top scores with supplier-loyal users are the attributes they are interested in. These are listed in Exhibit II-9.
- Hence, Scitex should decide what it wishes its market image to be, consistent with good returns, and then concentrate on building that image up in order to be able to tackle the competitors' strengths.
- In the instances of Hell and Crosfield, there would appear to be a choice of direction, reliability, and quality as against productivity and user friendliness.



EXHIBIT II-9

SUPPLIER STRENGTHS

SUPPLIER	STRENGTHS
Hell	Reliability Quality Techniques
Crosfield	Flexibility User-Friendly Systems Techniques
Dainippon	Reliability Good System



J. SCITEX-SUGGESTED SERVICES

- The main requirement for the suggested services appears to be post-installation training, but the other services with significant responses are shown in Exhibit II-10.
- It is recommended that Scitex do either a more detailed survey in Austria or consider providing a follow-up training facility across all countries.
- Training has emerged as a major requirement in all high-technology industries and, given a proper programme, should provide both good revenue and profit.



EXHIBIT II-10

SCITEX-SUGGESTED SERVICES

Austria Shows Most Interest

Assistance and Personnel Selection	75 %
System Planning and Management	80 %
Training after Initial Course	75 %
Evaluation of System Productivity	80 %

Training after Initial Course Has the Highest Score

Austria	75 %
Belgium	100 %
France	88 %
United Kingdom	71 %



K. INSTALLATION DATES OF CURRENT EQUIPMENT

- The main period during which the current equipment was installed is 1984 to 1986, but a fuller picture is given in Exhibit II-11.
- Sixty-seven percent of all the current base was installed prior to 1986.
- As a significant number of users (50% when upgrades are included) expressed a willingness to consider suppliers other than the ones they last purchased from, there is an excellent opportunity to sell into this replacement and growth market.



EXHIBIT II-11

INSTALLATION YEAR OF CURRENT BASE

CURRENT BASE INSTALLED	1980	1981	1982	1983	1984	1985	1986	1987
Number of Machines	8	9	21	15	30	35	41	16
Percent Accumulated	4	9	21	30	47	67	91	100

FORECAST MARKET*	1987	1988	1989	1990	1991
NUMBER OF MACHINES**	34	70	59	75	83

*Among Existing Customers

**Including Upgrades



L. CHANGES AND UPGRADES

- Working on a five-year replacement cycle (65%) and a two-year upgrade cycle (33%), the forecast market for new products and hence new service agreements is as shown in Exhibit II-12.
 - The majority of the changes and updates specifically mentioned by the customers are planned to take place before the end of 1988.
- This is, of course, not the whole market, and not even the full extent of that given in the customer responses if the previous replacement pattern is taken.

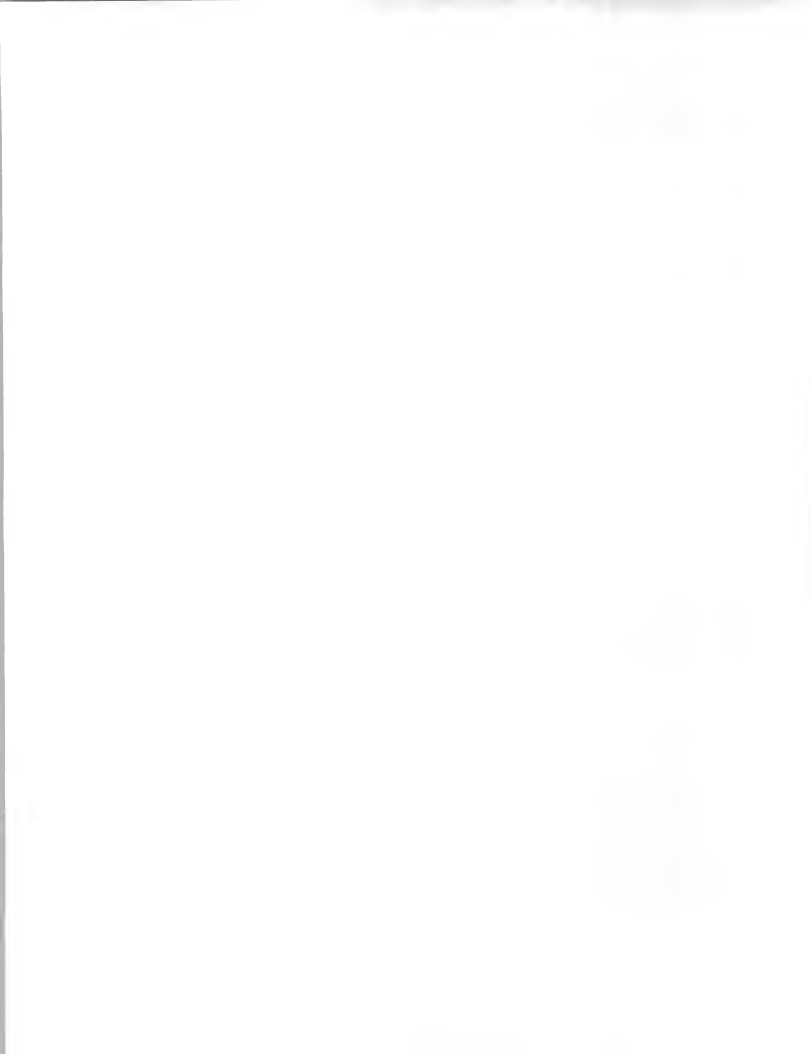


EXHIBIT II-12

CHANGES AND UPGRADES
(PERCENT OF USERS)

	HELL	CROSFIELD	DAINIPPON
Upgrade	49	49	33

	HELL	CROSFIELD
Change	11	27



M. MAIN TYPES OF CUSTOMER EQUIPMENT

- There is a close agreement between both major suppliers' figures for scanners as against complete page make-up systems.
- The ratio of scanners to page make-up will vary according to both machine productivity and technology changes; Exhibit 11-13 gives an indication of such variability.
- There may need to be consequent changes in service response.

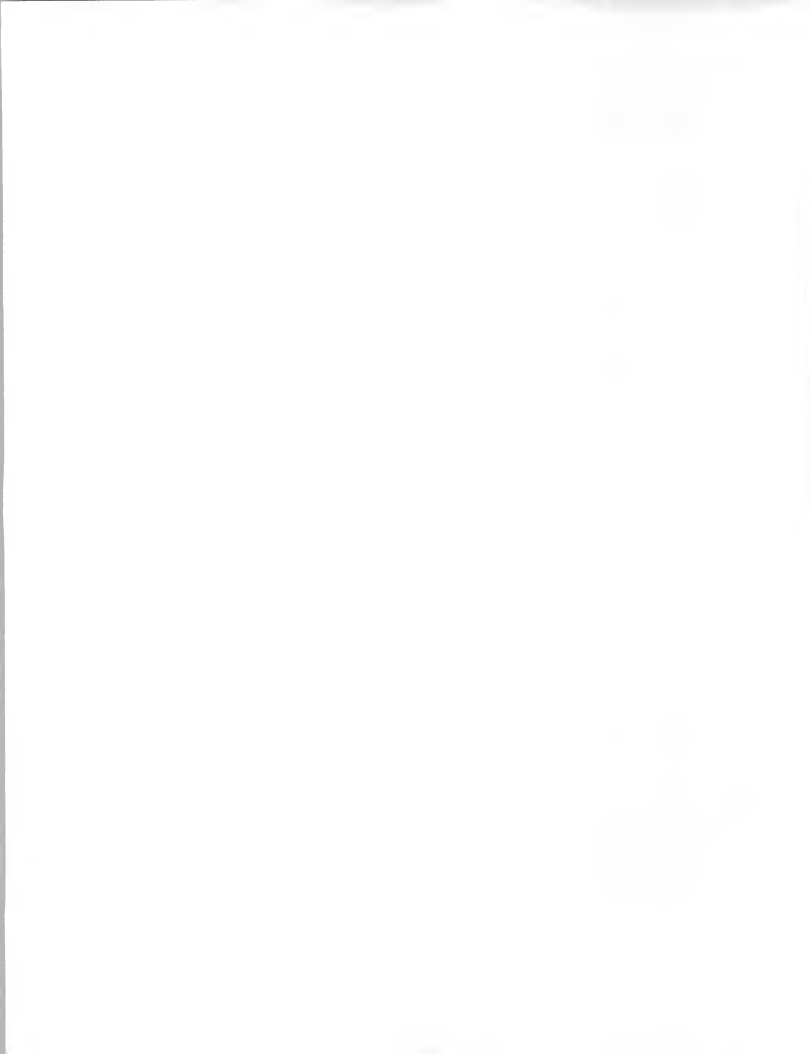


EXHIBIT II-13

MOST FREQUENTLY MENTIONED MACHINES

Heil	Chromacron	2 8
	350 Scanner	3 5
Crosfield	820 Composition	2 2
	645 Scanner	5 3



N. BUSINESS ENVIRONMENT

- From the customers/users sampled, the magazine and catalogue producers are the major sector, comprising some 48% of the responses. A synopsis is shown in Exhibit II-14.
- No other sector has over 10% of the total business.
- In these two sectors Hell and Crosfield customers have roughly the same proportions.
- It is considered that the main growth will also take place in magazines and catalogues, but packaging should also become an emerging opportunity due to the rapid growth in the service industry sector.

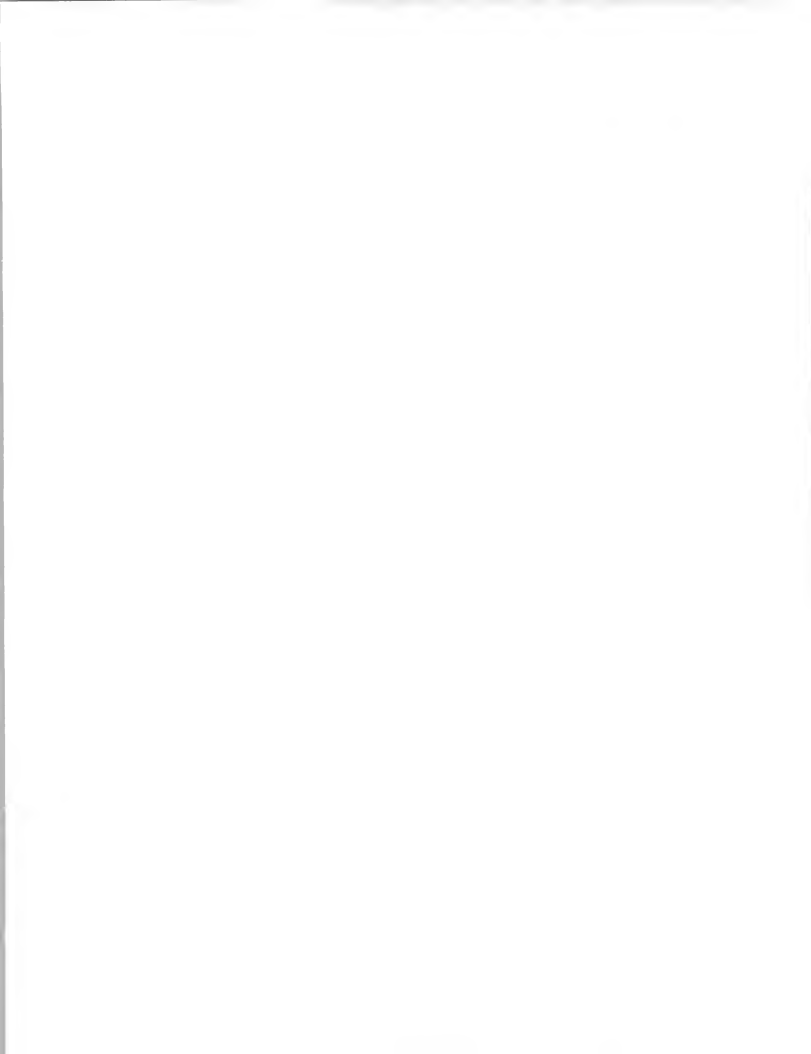


EXHIBIT II-14

PRIMARY BUSINESS INTERESTS OF CUSTOMERS

COMPANY	CATALOGUES	MAGAZINES
Heil	24 %	24 %
Crosfield	24 %	24 %

Note: Other responses all less than 10%.

Company with Small Sample Responses:

COMPANY	CATALOGUES	MAGAZINES
Dainippon	30 %	10 %

Note: Ratio of Item mentioned to total mentions.





CHAPTER III - BUSINESS ENVIRONMENT

III BUSINESS ENVIRONMENT

A. BUSINESS SECTOR

- With reference to Exhibit III-I it can be seen that catalogue and magazine work comprises 48% of the business interests of the customers sampled.
- In market-driven economies that emphasis is likely to continue, and with service industries emerging as a key growth area at the expense of manufacturing, this will be a growth area.
- In this context it is the view of INPUT that the packaging sector could be developed even though the design to launch time of the product being packaged can be significantly longer than in the case of magazines.
- INPUT believes that while there is great competition in the newspaper industry and there will be an interest in scanning plus text wraparound machines, these will be primarily delivered to the newspaper industry itself unless a market develops or can be developed at the smaller local level.
- It can also be seen that, except in the case of newspaper and packaging work, there is a rough balance between Hell and Crosfield in the other specified sectors, taking into account the relative sample populations (71/55).



EXHIBIT III-1

PRIMARY BUSINESS INTERESTS OF CUSTOMERS

COMPANY	PRIMARY INTERESTS							
	News-papers	Catalogues	Magazines	Printers	Packaging	Trade-shop	Publicity	Other
Hell	1 2	3 5	3 5	1 3	8	1 1	3	3 0
Crosfield	3	2 4	2 4	1 3	2	1 1	2	2 2
Dainippon	1	3	1	-	-	2	-	3
Total	1 6	6 2	6 0	2 6	1 0	2 4	5	5 5
Percent	6	2 4	2 4	1 0	4	9	2	2 1



- The choice for Scitex may revolve around:
 - Choosing a sector and/or country where Hell and Crosfield are weak.
 - Choosing a specific sector and addressing it with technical excellence.
 - Attack the market across the board but with some input edge such as quality and reliability.
 - Choosing a specific sector which is sensitive to productivity and down-time and addressing that sector with a clearly better (than the competition) service offering and actuality.

B. COST OF MAINTENANCE

- With reference to Exhibit III-2, it can be seen that there is a wide range of maintenance charges.
- The lower charges appear to be related for both companies to the size of installation, i.e., big installations have lower percentage maintenance charges.
- It should also be noted that in Italy there is a tendency to cover only the scanner.
- Although there is an indication that within a country the suppliers tend to compete on maintenance costs, there are also wide ranges of charges.
- The conclusion reached after reading the figures is that suppliers are competing on initial sales with service costs as a significant bargaining counter, and unless a supplier were to have very significant product advantages or customer loyalty this situation will continue.

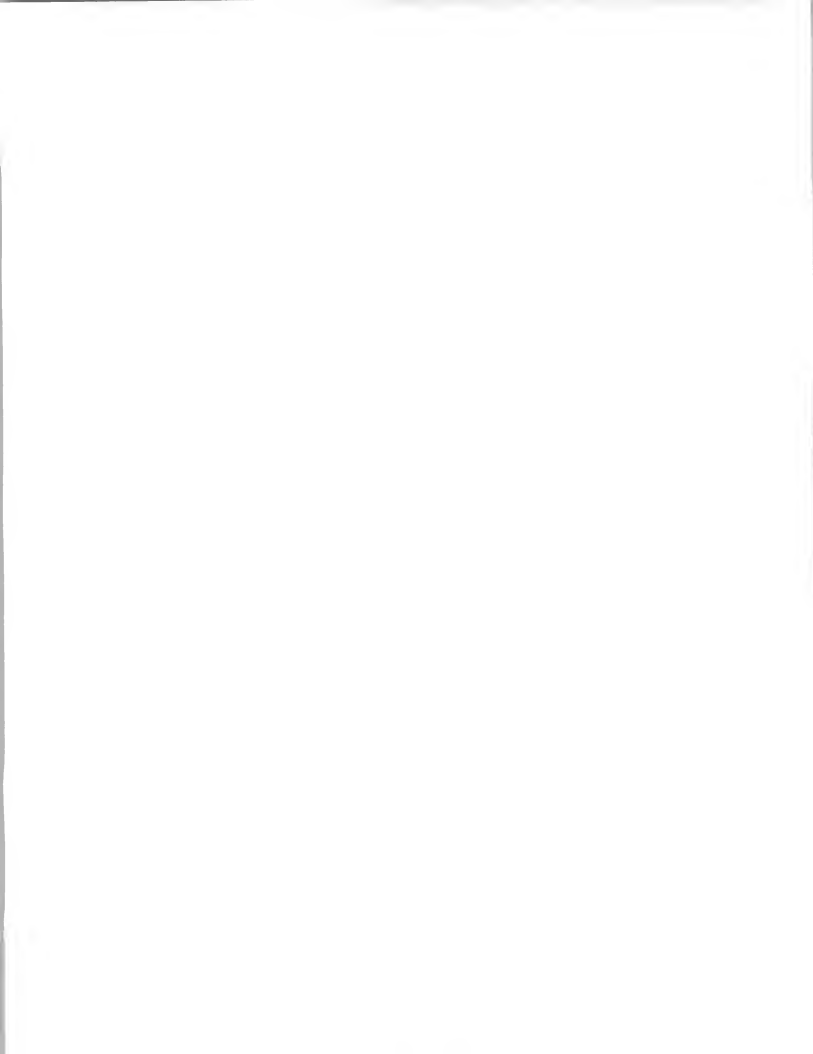


EXHIBIT III-2

COST OF MAINTENANCE

Hell	Sample Size	23.0
	Mean Value PA	5.8%(of system price)
	Top Value PA	12.0%
	Bottom Value PA	2.0%
	Sample SD	2.5

Crosfield	Sample Size	17.0
	Mean Value PA	6.1% (of system price)
	Top Value PA	10.0%
	Bottom Value PA	2.0%
	Sample SD	2.9



- It follows that each new business situation will need to be assessed on profit and revenue in both the initial equipment and subsequent service aspects.

C. INSTALLATION VALUES

- Exhibit III-3 gives the figures for the average value of each installation, and it is readily seen that this approximates to pounds sterling one million.
- There are relatively few small installations where there are only scanners, and this is reflected in the figures.
- In installations of this size it is unlikely that a user would change all his equipment at once, and it is recommended that Scitex examine its tactics in respect of:
 - Selling mix, scanners versus page make-up.
 - Interfacing.

EXHIBIT III-3

AVERAGE VALUE OF INSTALLATIONS IN
MILLIONS OF POUNDS STERLING

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	0.98	0.90	-
Belgium	0.72	-	-
France	0.90	1.07	-
Germany	1.87	1.07	0.65
Holland	1.20	0.99	-
Italy	0.91	0.59	1.39
Switzerland	1.00	1.00	-
United Kingdom	1.23	1.32	1.83
Averages	1.10	0.99	0.59
Sample Deviation	0.35	0.22	0.59



CHAPTER IV - MACHINES, UPDATES,
AND SWAPOUTS

IV MACHINES, UPDATES, AND SWAPOUTS

A. MACHINES

- Among the sampled population there were very few people with only the scanning facility, so this study necessarily deals mainly with the composition and page make-up sector.
- Scanners formed some 70% plus of the machine population, supporting the composition facilities.
- In addressing the market it is necessary to provide both scanning and page composition machinery from one supplier in order to avoid any interface problems and to ensure that the total facility can be properly serviced without argument as to which piece is at fault.
- Although there is obvious price competition in the marketplace, this was not mentioned, but the customers were found to be very sensitive about maintenance and/or service charges and also about system productivity.
- The most frequently mentioned machines and the ratio of scanners to page make-up machinery are shown by maker in Exhibits IV-1 through IV-4.



EXHIBIT IV-1

MOST FREQUENTLY MENTIONED MACHINES
HELL

MACHINE	NUMBER OF TIMES MENTIONED
Chromacon	2 8
Comblscope	1 5
350 Scanner	3 5
399 Scanner	1 0
340 Scanner	1 4 9
Total Scanners	2 1 7

Customer Sample Size: 71

Scanners as Proportion of Population: 77%



EXHIBIT IV-2

**MOST FREQUENTLY MENTIONED MACHINES
CROSFIELD**

MACHINE	NUMBER OF TIMES MENTIONED
820 Page Make-Up	22
860 Page Make-Up	9
840 Page Make-Up	5
645 Scanner	53
Total Scanners	89

Customer Sample Size: 55

Scanners as Proportion of Total Population: 71%

EXHIBIT IV-3

**MOST FREQUENTLY MENTIONED MACHINES
DAINIPPON**

MACHINE	NUMBER OF TIMES MENTIONED
Sigma graph 2000	2
Sigma graph 6000	2
888 Scanner	2

Customer Sample Size: 6



EXHIBIT IV-4

RATIO OF SCANNERS TO PAGE MAKE-UP MACHINERY

MACHINE	NUMBER
Page Make-Up Composition	83
Scanners	338
Ratio S/C	4.1



B. INSTALLATION DATES OF CURRENT BASE

- With reference to Exhibit IV-5, it can be seen that most of the machines were installed in the period 1984 to 1986.
- With reference to Exhibit IV-6 (and also IV-11) it is further seen that some 65% of the respondents intend to update or change their machines within the foreseeable future.
- The above figures would indicate that existing machinery is replaced or added to on a three- to five-year cycle (except for growth companies where the take-up might be higher).
- The possible take-up of new or replacement machinery among these respondent customers indicate a potential market, as shown in Exhibit IV-7.

C. UPGRADES

- As seen in Exhibit IV-6, 49% of Hell and Crosfield customers intend to upgrade their existing equipment, most likely within the next two years.
- Exhibits IV-8 and IV-9 show the percentage of loyal customers as against those who will definitely be looking at, but not necessarily using, an alternative supplier.
- Exhibit IV-10 shows the pattern of the people who did respond, but it is most likely that those giving no specific data to the upgrade, having already thought about it, will follow the same implementation pattern.



EXHIBIT IV-5

NUMBER OF MACHINES INSTALLED IN YEAR
(From Sampled Customers)

	Before 1980	1980	1981	1982	1983	1984	1985	1986	1987	Totals
Hell	2	2	7	15	7	16	19	21	4	93
Crosfield	2	2	1	5	8	12	15	17	11	73
Dalnippon	-	-	1	1	-	1	1	3	-	7
Totals	4	4	9	21	15	29	35	41	15	173
Percent Accumulated	2	5	10	22	31	47	68	91	100	-



EXHIBIT IV-6

INTENT TO UPGRADE

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	4	1	-
Belgium	2	-	-
France	9	6	-
Germany	13	6	1
Holland	1	-	-
Italy	3	2	1
Switzerland	1	2	-
United Kingdom	2	10	-
Total	35	27	2
Percent of Sample	49	49	33



EXHIBIT IV-7

POTENTIAL MARKET FOR NEW BUSINESS
AMONGST SAMPLED CUSTOMERS

YEAR	REPLACEMENT	NEW*	UPGRADES	TOTAL
1987 (last 1/2 year)	7	8	19	34
1988	24	18	28	70
1989	10	21	28	59
1990	20	24	31	75
	23	26	34	83

- (1) Based on five-year replacement cycle (65% of units).
- (2) Based on two-year upgrade cycle (49% of units in three years).
- (3) Based on 10% p.a. growth in service sector (all units).
- (4) Adjusted to customers' responses.

*Assumes current productivity levels - same shift working.



EXHIBIT IV-8

DISTRIBUTION OF CUSTOMERS INTENDING TO UPGRADE
BUT USING SAME SUPPLIER

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	3	1	-
Belgium	1	-	-
France	7	4	-
Germany	9	5	1
Holland	-	-	-
Italy	2	2	1
Switzerland	1	2	-
United Kingdom	2	8	-
Total	25	22	2
Percent of Sample	64	73	100



EXHIBIT IV-9

DISTRIBUTION OF CUSTOMERS INTENDING TO UPGRADE
BUT POSSIBLY USING DIFFERENT SUPPLIER

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	-	-	-
Belgium	1	-	-
France	4	2	-
Germany	5	-	-
Holland	1	-	-
Italy	1	-	-
Switzerland	-	1	-
United Kingdom	2	5	-
Total	14	8	-
Percent of Sample	36	27	-



EXHIBIT IV-10

DISTRIBUTION OF WHEN MACHINES ARE
LIKELY TO BE UPGRADED

COMPANY	1987	1988	1989	1990
Hell	10	6	4	-
Crosfield	8	5	-	1
Dalnippon	1	1	-	-
Total	19	12	4	1



- There are two points worth noting in this context:
 - Any customer can be open to persuasion given quality and productivity advantages.
 - Reliability and service aspects can be key factors in opening discussions and closing a deal.
- Upgrades may be more difficult for a new supplier to sell than new models, due to the interface problems.
- Germany and France show the greatest opportunity for new business in the upgrade sector.

D. SWAP-OUT OF MACHINES

- Exhibit IV-11 shows that a much lower percentage of the respondents were looking to buy new machines although it might well be possible to change an 'upgrade decision' into a 'new machine' deal.
- As might be expected, a comparison between Exhibits IV-8 and IV-12 shows that there is more customer loyalty on upgrades than on new machines.
- There is also a better than 50% chance of making a presentation to a Hell or Crosfield customer with a view to selling a new machine (see Exhibit IV-13).
- The points made in Chapter IV-C about quality, productivity, reliability, and service apply very strongly in the case of potential swap-out of machines, and Scitex will need to highlight its strengths in these areas.



EXHIBIT IV-11

INTENT TO CHANGE MACHINES

COUNTRY	HELL	CROSFIELD
Austria	1	2
Belgium	1	-
France	2	4
Germany	2	1
Holland	-	2
Italy	1	-
Switzerland	-	1
United Kingdom	1	5
Total	8	15
Percent of Sample	11	27



EXHIBIT IV-12

**CUSTOMER CHANGING MACHINES BUT
USING THE SAME SUPPLIER**

COUNTRY	HELL	CROSFIELD
Austria	1	2
Belgium	1	-
France	-	1
Germany	1	1
Holland	-	1
Italy	-	-
Switzerland	-	1
United Kingdom	1	3
Total	4	9
Percent of Total Changing	44	50



EXHIBIT IV-13

**CUSTOMER CHANGING BUT POSSIBLY
USING DIFFERENT SUPPLIER**

COUNTRY	HELL	CROSFIELD
Austria	-	-
Belgium	1	-
France	1	3
Germany	1	-
Holland	-	2
Italy	1	-
Switzerland	-	1
United Kingdom	1	3
Total	5	9
Percent of Total Changing	56	50



- Exhibit IV-14 shows that relatively few customers are prepared to state any plan to replace machines. This data is not confirmed by the table in Exhibit IV-5, which shows relatively few current machines installed over four years ago. The customers with this old equipment could be made aware of new offerings both in new technology and service.
- The respondents gave no clear pattern as to which country offers the most opportunity, but the following pointers should be noted:
 - Largest markets surveyed: France, Germany, and U.K.
 - Most developed economies: France, Germany, the U.K., and Holland.

EXHIBIT IV-14

WHEN MACHINES ARE LIKELY TO BE CHANGED

COMPANY	1987	1988	1989	1990
Heil	-	4	-	-
Crosfield	6	3	-	1
Dainippon	-	-	-	-
Total	6	7	-	1



CHAPTER V - MAINTENANCE

V MAINTENANCE

A. WARRANTY

- The number of warranties recorded (see Exhibit V-1) shows that nearly every customer is covered.
- The length of warranty is given, as an average, against each country and maker (see Exhibit V-2).
- On balance, the length tends to 12 months although Crosfield is having to give, or is giving as a market ploy, 18 months in its home (U.K.) market.
- Warranty, in general, does not become an issue with reliable equipment, and with good MTBF and MTTR figures it should be possible to reduce the warranty time offered.
- In addition, as examined later in the report, it may also be possible to negotiate a reduced fee maintenance contract with the customer at the time of equipment sale, going to full fee after the end of the warranty period.

EXHIBIT V-1

NUMBER OF CUSTOMERS WITH WARRANTY

COMPANY	NUMBER OF CUSTOMERS	PERCENT OF CUSTOMERS
Hell	6 8	9 6
Crosfield	5 4	9 8
DaInippon	6	1 0 0



EXHIBIT V-2

AVERAGE WARRANTY GIVEN
(Months)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	9	12	-
Belgium	12	-	-
France	11	11	-
Germany	11	12	9
Holland	14	14	-
Italy	11	14	12
Switzerland	6	14	-
United Kingdom	12	18	18
Averages	13.3	13.6	-

Total Warranties Recorded: 130



B. MAINTENANCE AGREEMENTS

- As shown in Exhibit V-3, Hell and Crosfield both have only 67% of their customers with a maintenance contract, and only about 20% for each signed at the best possible time--at the sale of the original equipment.
- Scitex will need to choose the approach to this question:
 - Separate sales departments for new equipment and maintenance.
 - Single sales point for both.
 - A mixed strategy with a follow-up by a specified department during the warranty period.
- The benefits in a mixed strategy are that:
 - Sales departments keep in touch with the workplace.
 - Service departments can be motivated by being in a profit centre.
- The disadvantages are:
 - Unconstructive competition between sales and service.
 - Two points of contact offered to the customer that might not always tell the same tale.
- With reference to Exhibit V-4, it is seen that some 86% of customers had maintenance contracts of one year or more, the larger ones tending to be those covering leased equipment as part of the leasing agreement.

EXHIBIT V-3

MAINTENANCE AGREEMENTS

COMPANY	WITH AGREEMENT (Percent)	SIGNED AT PURCHASE (Percent)	SIGNED AT EXPIRATION OF WARRANTY (Percent)	SIGNED AFTER ONE YEAR (Percent)
Hell	63	23	32	7
Crosfield	71	18	27	4
Dainippon	67	17	17	-



EXHIBIT V-4

LENGTH OF MAINTENANCE CONTRACT

COMPANY	ONE YEAR (Percent)	MORE THAN ONE YEAR* (Percent)
Hell	7 1	1 3
Crosfield	7 8	1 0
Dainippon	6 7	3 3

*Apparently tied to leasing agreements.



- There would not appear to be much merit in seeking contracts of over 12 months as:
 - A dissatisfied customer would stop paying anyway and maybe get rid of the equipment.
 - The inflation rate may give reduced margins on an indexed contract.

C. CONTRACT TERMS AND CONDITIONS

- With reference to Exhibit V-5, it can be seen that the most frequent terms among those given in the survey were:
 - Confidentiality.
 - Modification to the system.
 - Adding more to the system.
- It is rather surprising that consequential damages appear at all, but no doubt there is some limitation or this could require substantial insurance cover.
- Looking at force majeure and termination clauses with their low response, one is tempted to believe that some of the respondents had perhaps not read or understood the (normal) standard terms and conditions of the contract.
- In this context it would be possible for Scitex to generate a minimum set of terms and conditions which would ease the risk to the company and not cause any worries on the part of the customer.



EXHIBIT V-5

CONTRACT CLAUSES

CLAUSES	HELL	CROSFIELD	DAINIPPON	TOTAL
Number with Maintenance Agreement	5 2	3 9	4	9 5
Additions	2 1	1 5	1	3 7
Modifications	2 3	2 4	2	4 9
Termination Clause	7	7	1	1 5
Confidentiality	2 4	2 3	2	4 9
Force Majeure	6	4	1	1 1
Consequential Damages	1 5	1 2	-	2 7
Other	2	-	-	2



- An indication of the relative strengths of Hell and Crosfield is given in Exhibit V-6.
- When a large contract did require extra terms, these could be written in during the negotiation phase but should be costed and strategised prior to such negotiations.

D. SERVICE PARTS SUPPLIED UNDER MAINTENANCE AGREEMENT

- With reference to Exhibit V-7, it is apparent that a significant number of the respondents did not know either the exact terms of the contract or exactly what had been billed.
- The 13 to 18 percent of Hell and Crosfield customers who recognised a limitation on the supply of free replacement parts identified the expensive items such as lasers and disks as being chargeable.
- As there were, generally, more negative comments about Crosfield machine reliability, this may be the reason for the high percentage of customers claiming that everything is covered, i.e., Crosfield may be having to give free parts to retain custom.
- On the other hand, the cost of the contract may have been inflated to cover the spare parts costs. Unfortunately, most customers were unwilling or unable to give these costs so no conclusion can be formulated.
- However, what the data does show is that there is a clear opportunity to market a service which could be attractively low by charging extra for the replacement parts as long as the inherent machine reliability was good.

EXHIBIT V-6

**OVERALL CONTRACT CLAUSES AND TERMS
HELL VERSUS CROSFIELD
(Percentages)**

	HELL	CROSFIELD	ADVANTAGE
Additons	4 0	3 8	=
Modifications	4 4	6 2	H +
Preventive Maintenance	6 5	7 6	H +
Termination	1 3	1 8	
Confidentially	4 6	5 9	C +
Force Majeure	1 2	1 0	=
Consequential	2 9	3 1	=
Penalty	6	2 0	H++
All Spares Free	2 4	3 9	H +
Limitation	1 8	1 3	H +
Pay for W & T	6	9	C +
Limits on Calls	7 7	7 8	=
No Limits on Calls	3	2	=
Charge for Moving	4 1	4 9	C +
No Charge	1 3	1 8	H +
Payment Terms:			
30 Days or Monthly	3 5	5 0	
Quarterly	4 3	3 0	
Annual	2	3	=
P P Discount	2	3	=



EXHIBIT V-7

ARE SERVICE PARTS SUPPLIED FREE
UNDER THE CONTRACT?
(Percent)

COMPANY	LIMITATION*	EVERYTHING COVERED	WEAR AND TEAR PAID FOR
Heil	18	24	6
Crosfield	13	39	9
Dainippon**	33	67	-

*The limitations are generally the expensive parts, e.g., lasers/discs.

**Very small sample.



- In addition, the provision of free wear and tear parts should be considered as these are relatively low-cost, but an irritant to the customer.
- INPUT considers from the data recorded that:
 - Customers are sensitive on maintenance agreement costs.
 - They are relatively insensitive to charges once the contract is signed.
 - A profitable and attractive package can be put together incorporating the above points which could enhance new equipment sales.

E. LIMITS ON CALLS AND CHARGES FOR MOVEMENT

- From Exhibit V-8 it will be seen that there is very little difference between Crosfield and Hell on either the number of calls given free under the maintenance agreement or in charging for the movement of equipment.
- All other things being equal, Scitex will need to either respond or subscribe to this situation as it appears to be market-driven.
- However, it might be possible to replace this part of service with one which costs less to Scitex or even to go for a graded no-call bonus which would limit the unnecessary calls.

F. DISCOUNTS FOR MULTIPLE MAINTENANCE AGREEMENTS

- The results from this section of the survey are shown in Exhibit V-9.



EXHIBIT V-8

LIMITS ON CALLS AND CHARGES FOR MOVEMENT
(Percent)

COMPANY	NO LIMITS ON CALLS**	LIMITS ON CALLS	CHARGE FOR MOVING SYSTEM	NO CHARGE
Hell	77	3	41	13
Crosfield	78	2	49*	18
Dalnippon	50	17	-	50

*Most frequent charging basis was on hourly rate.

**Very few responses on number of calls the limit applies to.



EXHIBIT V-9

CUSTOMERS WITH DISCOUNT FOR
MORE THAN AGREEMENT

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	3	2	-
Belgium	1	-	-
France	3	5	-
Germany	17	7	1
Holland	2	2	-
Italy	2	1	-
Switzerland	-	1	-
United Kingdom	2	6	2

Discount ranged from 5% to 40% with Hell and from 10% to 30% with Crosfield.

- The discount level will vary with the amount of equipment on site, but there is still a surprising range (5-40%) of discounts given by Hell.
- Exhibits V-10 and V-11 show the levels of discount against each installation value, there being no significant correlation in this aspect. The percentage value appears to be negotiated each time.
- In the above situation it is recommended that the concept of 'criticality' be employed in order to be able to demonstrate to the customer that critical applications require more refined service contracts and that these cost more money.
- The recommendation is to ensure that the costs of maintenance are known for each site so that an adequate profit can be maintained when any contracts are being negotiated.

G. PAYMENT TERMS

- Exhibit V-12 shows that very few people pay annually in advance; hence, the best cash flow obtainable will, when traded against paperwork cost, be quarterly and paid either in advance or 50/50.

H. PREVENTIVE MAINTENANCE

- With reference to Exhibit V-13, it can be seen that there are significant country and company differences in the inclusion of preventive maintenance in the maintenance agreement.



EXHIBIT V-10

DISCOUNT ON MAINTENANCE CONTRACT
BY MAKER AND COUNTRY -
HELL

COUNTRY	DISCOUNT (Percent)	VALUE OF INSTALLATION*
Austria	4 0	17.5 M
Belgium	5	42.0 M
Germany	6	1.5 M

*Local Currencies

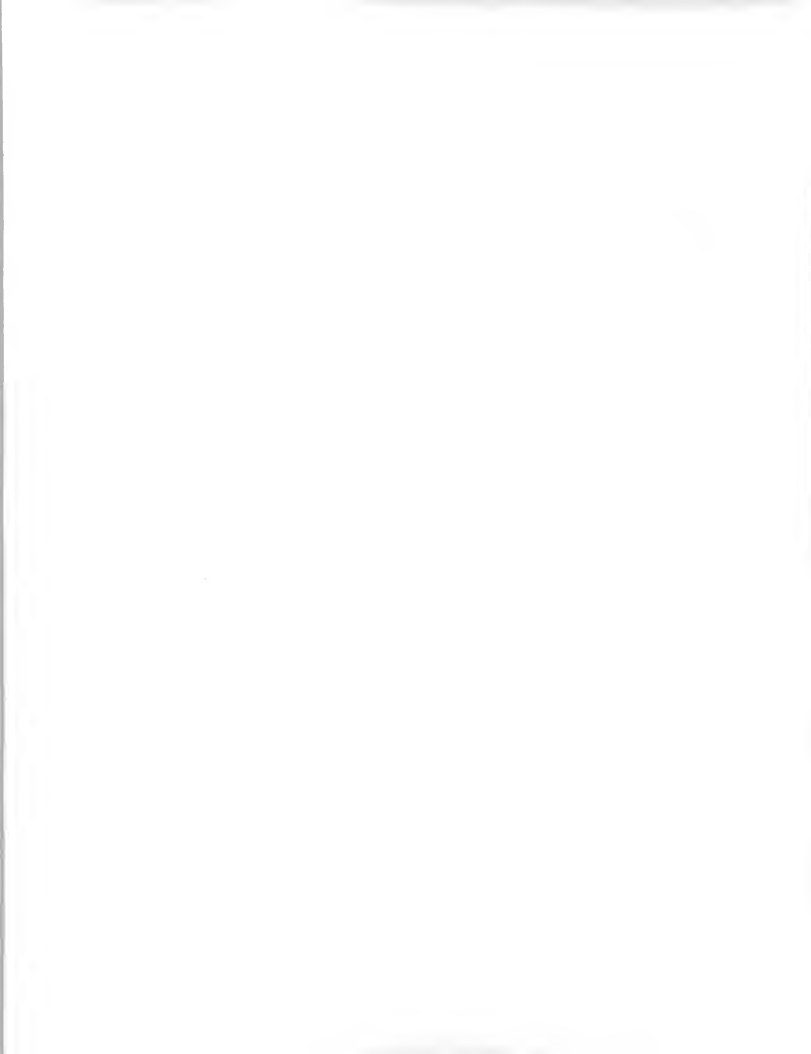


EXHIBIT V-11

DISCOUNT ON MAINTENANCE CONTRACT
BY MAKER AND COUNTRY -
CROSFIELD

COUNTRY	DISCOUNT (Percent)	VALUE OF INSTALLATION*
France	10.0	6.6M
	20.0	16.0M
Germany	2.0	1.6M
Holland	30.0	3.0M
Switzerland	30.0	2.0M
United Kingdom	15.0	1.0M
	12.5	1.0M

*Local Currencies

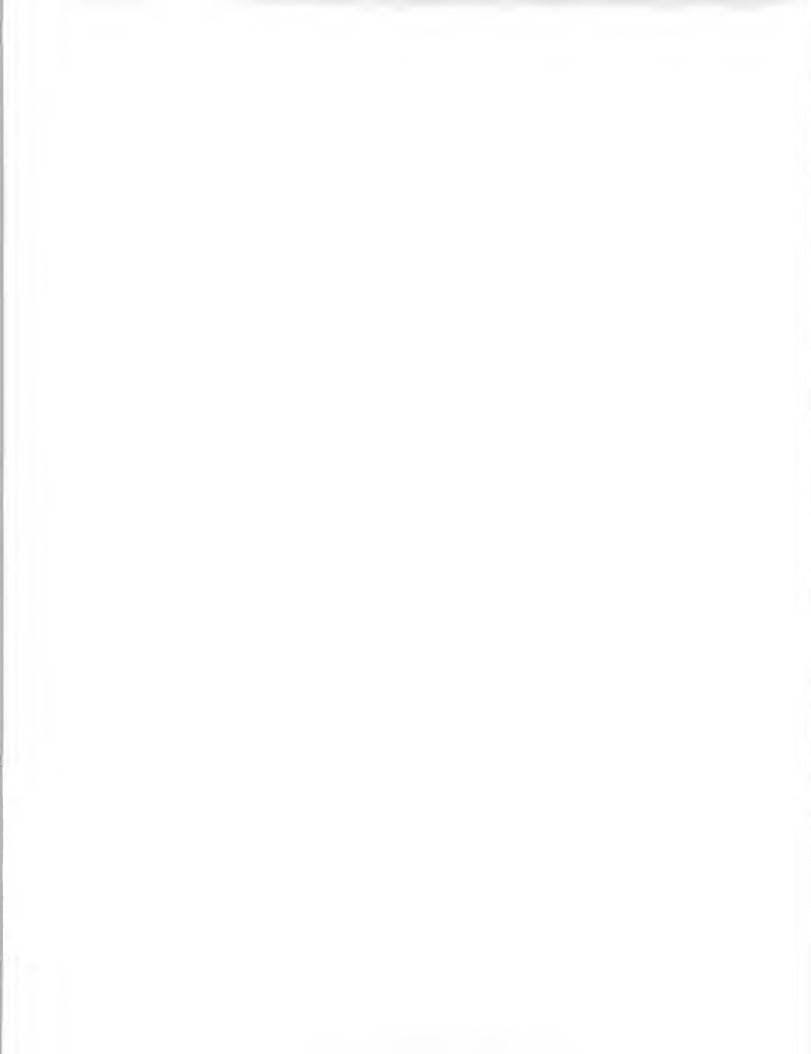


EXHIBIT V-12

PAYMENT TERMS

COMPANY	30 DAYS (Percent)	MONTHLY (Percent)	QUARTERLY (Percent)	ANNUALLY (Percent)	PD*
Hell	2 3	1 2	4 3	2	2
Crosfield	2 7	2 3	3 0	3	3
Dainippon*	-	-	-	-	-

*Prompt payment discount or advanced payment discount.

Respondents: Hell: 4 0

Crosfield: 3 0

Dainippon: 1



EXHIBIT V-13

PREVENTIVE MAINTENANCE COVERED BY CONTRACT
(Percent)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	50	100	-
Belgium	40	-	-
France	84	77	-
Germany	55	75	100
Holland	100	80	-
Italy	86	33	100
Switzerland	50	100	-
United Kingdom	38	83	33
Overall	65	76	67

*Over all makers, all customers, 69% were covered.

**Predominantly: Quarterly visits / 48 customers

Six monthly / 7 customers

Two monthly / 6 customers



- However, nearly 60% of all customers were covered, and of these, 55% had quarterly visits.
- These figures show that a clear strategy must be worked out for each country. This will depend on at least some of the following:
 - Reliability of the equipment.
 - Cost of the maintenance agreement.
 - Ability to have a low-cost attractive basic contract backed up with a separately charged preventive maintenance contract.
 - Competitive offerings in that country.

I. PENALTY CLAUSES

- Very few customers acknowledged having managed to get penalty clauses written into the agreement (the data are shown in Exhibit V-14).
- In most cases, the trigger point for penalties appears to be at 24 hours.
- Crosfield provided a significantly greater amount of penalty cover than Hell, but this could either be a marketing ploy or reaction to a bad image on reliability.



EXHIBIT V-14

PENALTY CLAUSES IN MAINTENANCE AGREEMENT

COMPANY	CUSTOMERS	PERCENT	WHAT TRIGGERS THE PENALTY
Hell	4	6	<ol style="list-style-type: none"> 1. 24 Hours Down 2. Poor Response
Crosfield	11	20	<ol style="list-style-type: none"> 1. 24 or 48 Hours Down 2. 24 Hours Down 3. Legal 4. Percent Downtime (figure) 5. Poor Response (2)



J. MAINTENANCE COST AGAINST HOURS COVERED

- Examination of the figures given in Exhibits V-15 and V-16 shows that there is little or no correlation between the maintenance cost, expressed as a percentage of the installation value, and the number of hours covered.
- However, there is a casual relationship between the maintenance cost ratio and the country.
- Hell's lowest figures are in Germany and Crosfield's in the U.K.; this may indicate only that each is determined to hold on to its home market. This poses a particular problem to competitors as it might present severe cost/profit problems to have to compete at the 2% level for 24-hour coverage in a foreign country.
- The key answer to this problem is to have reliable equipment, preferably with customer (self-help) diagnostics built in.

EXHIBIT V-15

MAINTENANCE COST AGAINST HOURS COVERED -
HELL

COUNTRY	PERCENT OF INSTALLATION VALUE	HOURS COVERED	INSTALLATION COST*
Austria	6.0	8.0	23.0M
Belgium	5.0	24.0	100.0M
	8.0	8.0	
France	6.0	20.0	22.0M
	5.0	12.0	10.0M
	10.0	14.0	10.0M
	6.0	12.0	10.0M
	4.0	16.0	6.0M
Germany	2.0	8.0	3.3M
	3.0	10.0	5.0M
Holland	8.0	19.0	9.0M
	7.0	16.0	1.5M
	4.5	24.0	2.6M
Italy	6.5	24.0	3.5B
	3.5	20.0	2.0B

*Local Currencies

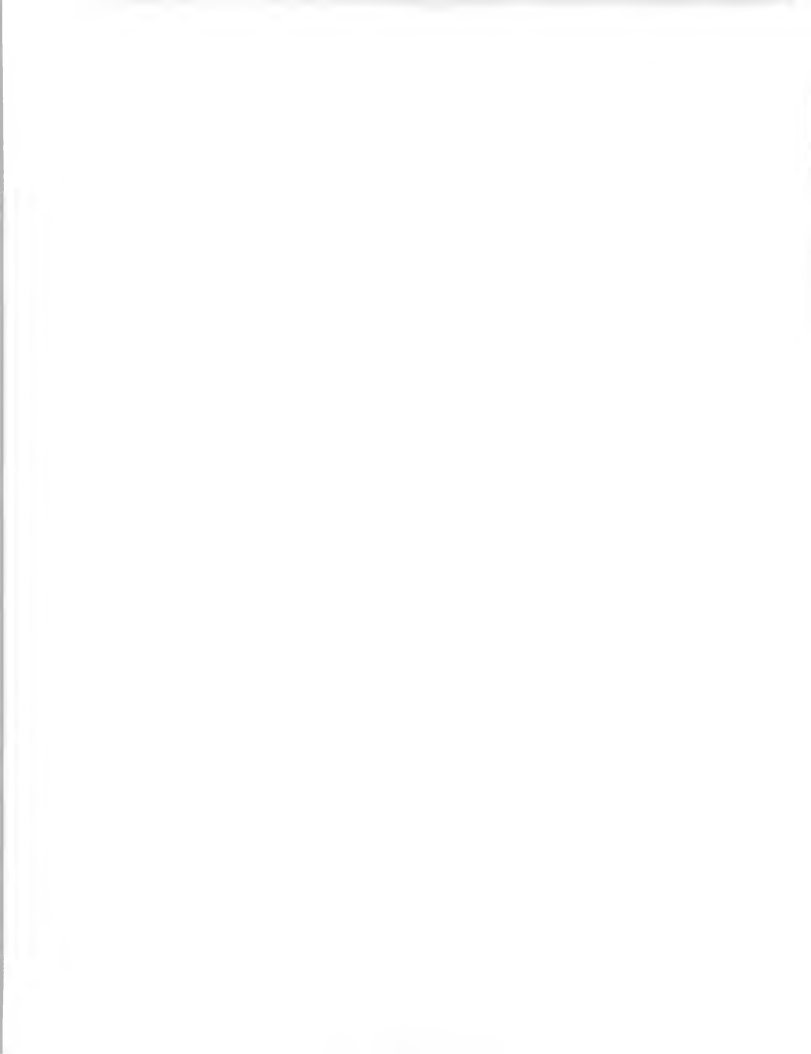
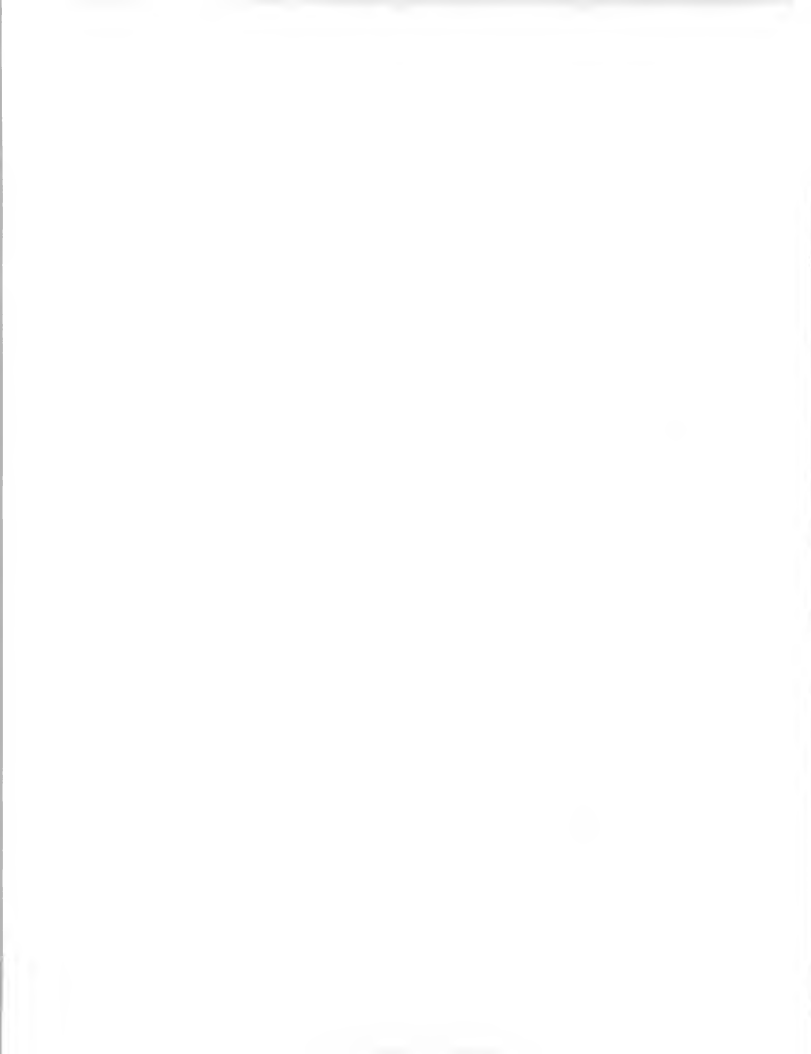


EXHIBIT V-16

MAINTENANCE COST AGAINST HOURS COVERED -
CROSFIELD

COUNTRY	PERCENT OF INSTALLATION VALUE	HOURS COVERED	INSTALLATION COST*
Austria	8.0	24.0	14.0M
France	5.0	1 x 24/2 x 8	16.0M
	10.0	13.0	6.0M
	10.0	11.0	6.6M
Holland	7.0	8.0	3.0M
Italy	3.5	8 +	2.0B
Switzerland	5.0	24.0	2.0M
United Kingdom	10.0	24.0	1.0M
	4.0	15.0	1.0M
	2.0	24.0	750.0K
	2.0	24.0	3.0M
	2.5	9.0	2.5M
	9.0	11.0	1.0M

*Local Currencies



CHAPTER VI - MAINTENANCE COVERAGE
AND RESPONSE TIME

VI MAINTENANCE COVERAGE AND RESPONSE TIME

A. COVERAGE

- The average hours covered per day are shown in Exhibit VI-1, and this is predominantly 16 hours, although more variation and lengthier hours are shown for Crosfield.
- In the industry, and in high-technology industries as a whole, it is becoming more common and more necessary to use equipment on a two- or three-shift system in order to recoup the capital cost in a reasonable time. In INPUT's view, this trend will continue and will drive the hours up above the 16 hours currently recorded.
- Exhibit VI-2 shows that in all countries other than Italy there is a high take-up or demand for coverage on Saturday.
- A look at the customer comments also shows that customers also want a variable shift cover, and, as noted before, it is likely that this type of service and cover will be required from any supplier.
- With reference to Exhibit VI-3, it can be seen that the demand or take-up of Sunday cover is quite limited. It is suggested that a pilot study be conducted in France to see if Sunday cover is a market opportunity to sell both new equipment and service.



EXHIBIT VI-1

MAINTENANCE COVERAGE MONDAY THROUGH FRIDAY
(Average Hours Covered Per Day)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	16	16	-
Belgium	16	-	-
France	14	15	-
Germany	16	21	8
Holland	19	15	-
Italy	18	16	-
Switzerland	16	24	-
United Kingdom	16	17	24
Average	16	18	16



EXHIBIT VI-2

MAINTENANCE COVERAGE ON SATURDAYS
(Percent of Customers with Cover)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	100	100	-
Belgium	60	-	-
France	68	62	-
Germany	82	75	100
Holland	100	100	-
Italy	43	17	-
Switzerland	100	100	-
United Kingdom	63	61	67



EXHIBIT VI-3

MAINTENANCE COVERAGE ON SUNDAYS
(Percent of Customers with Cover)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	50	100	-
Belgium	40	-	-
France	5	8	-
Germany	41	50	50
Holland	-	-	-
Italy	14	17	100
Switzerland	100	100	-
United Kingdom	50	61	67



B. RESPONSE

- In Exhibit VI-4 it can be seen that Hell is quicker at getting to a customer, but that Crosfield is significantly quicker at effecting a repair.
- Dainippon put in some very good figures in this context, but it must be remembered that the sample in this case is very small.
- The size of the installation and the complexity of the system must also be considered when comparing repair times.
- In Exhibit VI-5 it will be noted that there are some very significant differences between countries, with Switzerland expecting a response some three times more quickly than Germany.
- Overall, the response times match the expectations, but it must be remembered that there is every likelihood that people tend to expect and accept what they get.
- This cannot, however, be the case with repair time as the actual performance exceeds the acceptability. This must represent a real and costly strategy to please the customer and gain more market share.
- At first sight it would appear to be best to try a pilot strategy in Germany where the expectations are less and where it would be relatively less expensive to set up any given level of service.

EXHIBIT VI-4

RESPONSE AND REPAIR TIME BY SUPPLIER

COMPANY	HOURS				
	DRT*	REPORT UNTIL ARRIVAL		REPAIR TIME	
		ACCEPTABLE	EXPERIENCED	ACCEPTABLE	EXPERIENCED
Hell	9.1	5.4	5.5	12.7	14.6
Crosfield	8.9	6.4	7.1	9.1	11.8
Dalnppon	18.0	4.9	2.3	5.5	3.4

*Defined response time in contract.

Note: One working day = 8 hours.

EXHIBIT VI-5

RESPONSE AND REPAIR TIME BY COUNTRY

COUNTRY	HOURS				
	DRT*	REPORT UNTIL ARRIVAL		REPAIR TIME	
		ACCEPTABLE	EXPERIENCED	ACCEPTABLE	EXPERIENCED
Austria	6.0	6.0	1.5	8.0	8.0
Belgium	-	-	-	-	-
France	11.9	5.6	7.1	-	-
Germany	3.7	9.8	9.1	9.2	18.5
Holland	9.2	4.3	3.6	6.3	4.0
Italy	16.0	6.6	7.5	21.3	18.0
Switzerland	3.0	3.0	4.0	-	-
United Kingdom	9.3	3.6	3.1	8.5	11.0
Overall	9.2	6.1	6.4	15.2	10.0

*Defined response time in contract.

Note: One working day = 8 hours.





CHAPTER VII - OVERALL SUPPORT--HARDWARE
SOFTWARE, APPLICATIONS

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VII OVERALL SUPPORT—HARDWARE, SOFTWARE, APPLICATIONS

A. OVERALL SUPPORT FIGURES

- Exhibit VII-1 gives the figures obtained from those customers who answered the question of 'does the agreement cover . . .?' For comparison, the percentages relating to the total customer population are given in Exhibit VII-2.
- The amount of support decreased from hardware through software to applications, although it is relatively unlikely that most customers are competent or self-sufficient in those areas.
- This could be a cost-cutting exercise, the software and applications could be very reliable, or it could represent a market opportunity for the right-priced product.

B. HARDWARE MAINTENANCE

- With reference to Exhibit VII-3, it can be seen that there are wide variations between both countries and suppliers in the provision of hardware services.
- The above response demonstrates the care that must be taken in evaluating any new service to any new country. In fact, if service is a major revenue and

EXHIBIT VII-1

OVERALL SUPPORT FIGURES
(Percent of Customers Covered)*

COUNTRY	HARDWARE	SOFTWARE	APPLICATIONS
Austria	100	80	75
Belgium	100	100	75
France	100	92	45
Germany	100	92	65
Holland	100	89	88
Italy	100	100	80
Switzerland	92	96	83
United Kingdom	98	93	65
Overall	99	92	60

* Of those who responded to the question, i.e., had agreements and were covered.

EXHIBIT VII-2

**OVERALL SUPPORT FIGURES
(Percent of Total Customers)**

COUNTRY	HARDWARE	SOFTWARE	APPLICATIONS
Austria	8 3	6 7	5 0
Belgium	8 0	1 0 0	6 0
France	7 6	7 0	3 4
Germany	7 5	6 9	5 1
Holland	1 0 0	8 9	7 8
Italy	6 4	6 4	9
Switzerland	1 0 0	1 0 0	8 0
United Kingdom	7 7	7 7	6 6
Overall	8 2	7 6	5 3



EXHIBIT VII-3

PROVISION OF HARDWARE MAINTENANCE
(Percent of Customers Covered)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	100	100	-
Belgium	80	-	-
France	84	77	-
Germany	82	88	100
Holland	100	100	-
Italy	86	33	100
Switzerland	100	100	-
United Kingdom	63	89	67



profit centre, then both Italy and the U.K. would need to be investigated to determine why hardware maintenance is maker-dependent:

- Poor reputation.
- Too costly (i.e., no room for maximising returns).
- Culture problem.
- More or less reliable machines.

C. SOFTWARE MAINTENANCE

- With reference to Exhibit VII-4, the same type of pattern of support can be seen as was evidenced with hardware except that the level is less.
- Again, one would have to be very careful as to what new service could be sold in this type of environment and a market survey should be done with specific questions as to the reasons for having or not having cover addressed to the customers.

D. APPLICATIONS SUPPORT

- Exhibit VII-5 shows the response of the reduced number of customers having support in this area. Again, there are wide country and supplier differences.
- Future offerings in this area must be the subject of further investigation, but the same investigation could cover hardware, software, and applications.

EXHIBIT VII-4

PROVISION OF SOFTWARE MAINTENANCE
(Percent of Customers Covered)

COUNTRY	HELL	CROSFIELD	DAINIPPON
Austria	75	100	-
Belgium	100	-	-
France	79	85	-
Germany	82	88	50
Holland	75	100	-
Italy	86	33	100
Switzerland	100	100	-
United Kingdom	75	83	67



EXHIBIT VII-5

PROVISION OF APPLICATION SUPPORT
(Percent of Customers Covered)

COUNTRY	HELL	CROSFIELD	DAINIPPON	SCITEX
Austria	50	100	-	-
Belgium	60	-	-	-
France	32	38	-	0
Germany	55	38	50	-
Holland	100	60	-	-
Italy	0	0	100	-
Switzerland	50	100	-	0
United Kingdom	50	78	67	-



CHAPTER VIII - SOFTWARE SERVICES

VIII SOFTWARE SERVICES

- Exhibit VIII-1 shows an analysis of the responses of 103 out of 126 customers who had a software maintenance agreement.
- Again, Crosfield was providing a higher overall level of service with higher figures both for on-site and telephone. Whether this is because of good service or difficult software is a moot point.
- Exhibit VIII-2 demonstrates that a reasonably high percentage of customers are covered for software updates in the software contract, but it is rather surprising that it is not 100% as most updates increase either the quality of the product or the productivity of the system.
- However, there is a point of view that once a thing is running then it pays to keep it going at its current level and then do a major update every so many years.
- For each individual piece of equipment, it would need to be established what the trade-off was between extra time on maintenance in achieving a given quality benchmark as against the cost of software which might address the very same problem
- It should also be noted that an extra charge is possible in a significant number of cases, and this could be part of the marketing strategy.

EXHIBIT VIII-1

SOFTWARE SERVICE TAKE-UP

COMPANY	WITH SOFTWARE AGREEMENTS	UPDATES/ 'UPGRADES' INCLUDED	ON-SITE INCLUDED	RESPONSE (HOURS)
Hell	5 5	2 9	2 9	6
Crosfield	4 4	3 4	5 7	6
Dalnippon	4	2 5	5 0	5 0

COMPANY	TELEPHONE SERVICE (Percent)	RESPONSE (Hours)	NEW INFORMATION SENT
Hell	4 4	1 . 0	0
Crosfield	6 8	2 . 0	0
Dalnippon	5 0	0 . 5	0



EXHIBIT VIII-2

**SOFTWARE UPDATES COVERED IN
SOFTWARE MAINTENANCE AGREEMENT**

COMPANY	PERCENT COVERED	PERCENT PAYING EXTRA CHARGE
Hell	63	39
Crosfield	75	22
DalnIpbon	50	100

***Percent of those with upgrade agreement.**



CHAPTER IX - CUSTOMER SATISFACTION

IX CUSTOMER SATISFACTION

A. QUALITY OF SERVICE

- Exhibit IX-1 gives a breakdown of the customer reaction to the various service and customer satisfaction aspects of the four suppliers, although it must be remembered that the sample size for Dainippon is quite small.
- The overall satisfaction level is quite high and the sampled standard deviation is given as a guide to scatter.
- What the figures indicate is that any new entrant to a particular service needs to achieve a satisfaction index of better than 70% and keep it at that after the 'honeymoon' period.

B. SUPPLIER STRENGTHS

- What the customers think are the strengths of Hell are shown in Exhibit IX-2; those for Crosfield are in Exhibit IX-3 and for Dainippon in Exhibit IX-4.
- The main points that come out for Hell are:
 - Reliability.

EXHIBIT IX-1

**CUSTOMER SATISFACTION WITH QUALITY OF SERVICE
(Percent)**

SERVICE	HELL	CROSFIELD	DAINIPPON
System Performance	76	74	84
System Availability	74	74	84
Service Engineer's Attitude	82	76	76
SE Availability and Response Time	78	66	80
SE Ability and Competence	76	72	68
Response to Telephone Enquiries	78	70	72
Availability of Spare Parts	72	66	84
Quality of Training Given	74	72	76
Quality of Operator and Technical Manuals	66	62	72
Support of Applications Software	64	62	84
Overall Service Performance	68	62	80
Service Compared to Other Companies	76	68	85
Average	74	69	79
SD (N-1)	5.3	5.1	5.8



EXHIBIT IX-2

HELL'S STRENGTHS - WHAT THE CUSTOMER THINKS

COUNTRY	COMMENTS
Austria	<ol style="list-style-type: none"> 1. Trustworthy, reliability. 2. Reliability of the Hell technique. 3. Technical conception of equipment.
Belgium	<ol style="list-style-type: none"> 1. They believe in the idea of Hell. 2. The quality of the product and the service (2). 3. Overall performance.
France	<ol style="list-style-type: none"> 1. Experience in this sector and continuity. 2. Name of supplier: good organisation; spread presence (2). 3. Performance (2) and service. 4. Quality of equipment (3). 5. The homogenous nature of the system, no interface problems. 6. Good technology.
Germany	<ol style="list-style-type: none"> 1. State of technique (2). 2. Outstanding service (4). 3. Reliability (4). 4. Always there, can organise everything, anytime. 5. They are always at one's disposal, are competent. 6. Technicians are competent (2) for all different modes. 7. Profound technical knowledge, good consultation. 8. Well-developed systems, good objective advice. 9. Personal contact to supplier.
Holland	<ol style="list-style-type: none"> 1. The machines are very good and work most of the time. 2. Hell gives very good service and we like this. 3. The reliability of the Hell system.
Italy	<ol style="list-style-type: none"> 1. Very good reliability of machinery (2). 2. Name of supplier guaranteed continuity and development. 3. Good assistance (3).
Switzerland	<ol style="list-style-type: none"> 1. Reliability of the Hell system. Only a few mistakes. 2. Overall performance.
United Kingdom	<ol style="list-style-type: none"> 1. The quality and reliability (3) of Hell. 2. Good on the scanning side. 3. Price and response time. 4. In comparison with other suppliers they have the edge.

EXHIBIT IX-3

CROSFIELD'S STRENGTHS - WHAT THE CUSTOMER THINKS

COUNTRY	COMMENTS
Austria	1. Reliability, swiftness.
France	1. Overall good performance (2). 2. Technically quite good (3). 3. User friendly. 4. The table is hardly ever out and is simple to operate. 5. Quality of system (2). 6. Advanced technology. 7. Capability of the system and evolution in the system.
Germany	1. Crosfield is No. 1. They are extremely user-friendly. 2. Engineers live near company, easy to call. 3. Software, technology. 4. Fine lines of VDU - system, excellent scanner. 5. Cheaper than other suppliers.
Holland	1. Technical quality and good information about techniques. 2. The configuration of the page make-up. 3. Swiftness; technicians are quick and competent. 4. Fast machines, easy to operate, good contract. 5. The machines are easy to work with.
Italy	1. The combination of the system. 2. Flexibility of following the specific requirements.
Switzerland	1. Crosfield develops new equipment much faster. 2. The quality - price relationship. 3. The service and the reliability of the scanner.
United Kingdom	1. Good quality of machine results, modules easy to change. 2. The quality (2), reliability (3), and flexibility of the products. 3. Support given for call-outs, night and day. 4. They have got the best equipment in that range. 5. First class equipment (3). 6. As a manufacturer, i.e., not maintenance. 7. The productivity of new products, new systems, etc. 8. Quality of system technique, good back-up. 9. They are good in research and development of new techniques. 10. Technical understanding of what we are trying to do. 11. The general progress and position they hold in the market.

EXHIBIT IX-4

DAINIPPON STRENGTHS - WHAT THE CUSTOMER THINKS

COUNTRY	COMMENTS
Germany	1 . Well-developed systems, good, objective advice. 2 . Machine = system: very good reliability.
Italy	1 . Good relations with manufacturer.
United Kingdom	1 . Reliability. 2 . The quality of their system.



- Quality.
- Techniques.
- Similarly, for Crosfield the main points are:
 - Flexibility.
 - User-friendly systems.
 - Technical quality.
- The main points for Dainippon are:
 - Reliability.
 - Good system.

C. UNCORRECTED FAULTS

- Exhibit IX-5 gives the verbatim responses of Hell customers and shows a minimal dissatisfaction level.
- Exhibit IX-6 gives the same type of response for Crosfield, but here there is a higher level of specific dissatisfaction.
- This would suggest that, at least in these areas, Crosfield could be subject to supplier penetration.

EXHIBIT IX-5

COMMENTS OF HELL CUSTOMERS ON UNCORRECTED FAULTS

COUNTRY	COMMENTS
Austria	1. There are always technical problems due to the different construction of the equipment.
Belgium	1. Not at the moment, but between 1982-1984 they had service problems with the laser.
France	1. With a rotating image cannot validate, they know about that and cannot correct it. 2. Provision of obsolete spare parts; have to pay extra for update to new version.
Germany	1. The laser of one of the scanners still does not work properly. 2. They have always the same problems because the supplier's ability to solve problems is very poor. 3. Productivity system is not efficient enough yet. 4. Construction faults.
Italy	1. False start of one scanner. 2. Compatibility between old and new system.
United Kingdom	1. A new scanner under warranty has many intermittent faults.

EXHIBIT IX-6

COMMENTS OF CROSFIELD CUSTOMERS ON UNCORRECTED FAULTS

COUNTRY	COMMENTS
France	<ol style="list-style-type: none"> 1. When new software is introduced it is not sufficiently tested, and therefore there are always problems. 2. Technical scanner problems for specific production. 3. Four uncorrected situations: line-up of the head reading disc. 4. Software problems - this is a normal situation and takes a few months to be corrected. Otherwise, minor problems. 5. With 645 Scanner the image return was not good after a new piece of software was put in. 6. The firm came out once a week with stripes. Then, once a day all the time. The engineers took at first a very casual attitude, calling it acceptable to have stripes once a week. In the end, it took six months to correct it.
Germany	<ol style="list-style-type: none"> 1. Spare parts delivery time should be improved. 2. Uncertainty because of communication problems between engineers and supplier.
Switzerland	<ol style="list-style-type: none"> 1. They had a few months ago, a problem with the combination of hardware and software which had not been solved for two months.
United Kingdom	<ol style="list-style-type: none"> 1. Problems with the disk drives but we are learning to live with it. 2. A running problem on computer - Intermittent fault (Crosfield). 3. The original 645 Scanner is a rogue - every part except the castors has been changed twice, it has cost Crosfield far more than if they had replaced the 645 and totally soured relations. 4. They have had a technical problem with the 845 for 18 months which is not solved up to now. 5. At present, system down because the page make-up cannot speak to the floppy disk. 6. Minor problems with the studio 880 which they hope will soon be solved. 7. Several uncorrected services situations especially with the studio 825. 8. At present, there are on-going problems with the press which are being dealt with on warranty. 9. This is an ongoing dispute with Crosfield - the old scanner has never been right - not to my satisfaction. 10. The software of the studio 800.

D. HOW THE SERVICES COULD BE IMPROVED

- Exhibit IX-7 shows that the main areas of suggested improvement for Hell are:
 - Technical ability of engineers.
 - More information.
 - More cover 'out of hours'.
- For Crosfield (see Exhibit IX-8), the main areas for improvement are:
 - Better training for the engineers.
 - More cover 'out of hours'.
 - Maintenance costs must be reduced.
- Exhibit IX-9 for Dainippon is included for completeness, but there is no recurring theme.
- Hence, the picture that comes from the Hell and Crosfield customers is that the engineers they have need more and better training and should work faster, and that more cover is needed at night and weekends.

EXHIBIT IX-7

CUSTOMERS' COMMENTS ON HOW HELL
COULD IMPROVE ITS SERVICE

COUNTRY	COMMENTS
Austria	1. Service engineers should give more information about technical matter.
Belgium	1. Better training for personnel, both maintenance supplier and in-house. 2. Be quicker.
France	1. Better translation of technical manuals into French. 2. Provide a good night service for low cost. 3. Better telephone service. 4. Better availability of spare parts. 5. More well-trained engineers (2). 6. Updates to software should be free. 7. Assistance over the weekend (3). 8. Better system information. 9. Reduce the cost of maintenance. 10. Reduce the price of software. 11. Better qualified engineers. 12. The response to a service call (3).
Germany	1. He has to take care much more and should react more quickly to his calls. 2. All engineers should be able to repair everything. 3. Better service engineer ability and product competence. 4. He should supply more information about techniques and software updates. 5. A more flexible and imaginative service. 6. Should install a service which is available in cases of emergency. 7. System should be faster and more user friendly. 8. Lower the prices.
Holland	1. The quality of staff could be improved. 2. It is difficult to describe, but they should try harder to solve technical problems. 3. We have had to introduce a log book system for engineers in order to keep track.

Continued

EXHIBIT IX-7 (Cont.)

CUSTOMERS' COMMENTS ON HOW HELL
COULD IMPROVE ITS SERVICE

COUNTRY	COMMENTS
Italy	<ol style="list-style-type: none">1. There should be always the same technician available.2. More complete technical update of engineer: local presence of support and spare parts.3. Consider more carefully the specific requirements of the customers.4. Evolution of practical applications should be quicker.
Switzerland	<ol style="list-style-type: none">1. Should improve on its service in general.2. Everything can be improved.
United Kingdom	<ol style="list-style-type: none">1. Software update faster together with more information.2. Could improve service tremendously by having a bigger team of engineers.3. Give more information on the product at time of sale.4. Defined level of spares.

EXHIBIT IX-8

CUSTOMERS' COMMENTS ON HOW CROSFIELD
COULD IMPROVE ITS SERVICE

COUNTRY	COMMENTS
France	<ol style="list-style-type: none"> 1. Better availability of spare parts (2). 2. Crosfield should sort out the French office, train people better, better attitude. 3. Test their software, have a French manual. 4. Better availability of spare parts. 5. Better information and make sure all the service engineers are competent. 6. Better assistance at night. 7. Get a good stock of spare parts in Lille instead of only Paris. 8. Better response time. 9. Quality of HRS personnel, training.
Germany	<ol style="list-style-type: none"> 1. Shortening of calculation (system) time. 2. Could work more regularly, could be more reliable, quicker. 3. Offer a 24-hour service. 4. More technicians. 5. Qualified technicians.
Holland	<ol style="list-style-type: none"> 1. Training of personnel in national company. 2. They should be quicker. 3. Contract and information should be improved on the technical side.
Italy	<ol style="list-style-type: none"> 1. The cost of maintenance must be brought down (3) and insurance included. 2. There should be a technical magazine every month about all updates.
Switzerland	<ol style="list-style-type: none"> 1. They should educate their people better (2).

Continued



EXHIBIT IX-8 (Cont.)

**CUSTOMERS' COMMENTS ON HOW CROSFIELD
COULD IMPROVE ITS SERVICE**

COUNTRY	COMMENTS
United Kingdom	<ol style="list-style-type: none"> 1. Reliability and competence of the service. 2. The availability of the engineers after 5 p.m./24-hour service - the answer phone is not respondent from 5 p.m. until 9 a.m. 3. Should do what they promised and in an economical way. 4. Should give cover at weekend. 5. Maintenance contract too expensive. 6. Get more engineers; get better trained, more knowledgeable engineers. 7. Improve the engineering support of software. 8. Have an engineer nearer than Bristol. 9. The Instructor should come back a second time four months after the initial training. 10. Spare parts availability and the service engineers' ability and productivity. 11. They could inform us better on software developments. 12. The service engineers should improve their ability and product competence.



EXHIBIT IX-9

CUSTOMERS' COMMENTS ON HOW DAINIPPON
COULD IMPROVE ITS SERVICE

COUNTRY	COMMENTS
Germany	1. System could be faster and more user-friendly. 2. Would like to have a separate 'Endseitenrechner' - end-page calculator.
Italy	1. Better presence of technicians. 2. More Information.



CHAPTER X - REQUIREMENT FOR SCITEX-
SUGGESTED SERVICES

X REQUIREMENT FOR SCITEX-SUGGESTED SERVICES

A. ASSISTANCE AND PERSONNEL SELECTION

- With reference to Exhibit X-1, the only two countries showing significant interest in this service were Austria and Belgium.
- However, the level of interest is high and represents a good market, or marketing, opportunity.

B. SYSTEMS PLANNING AND MANAGEMENT

- Again, there were only two countries showing significant interest--Austria and Holland.
- As indicated above, this gives an opportunity for a supplier to talk to potential new customers about things they are interested in and to use it as a lever to more substantial business.

EXHIBIT X-1

REQUIREMENT FOR SCITEX-SUGGESTED EXTRA SERVICES
(Percent of Customers Interested)

COUNTRY	ASSISTANCE AND PERSONNEL	SYSTEM PLANNING AND MANAGEMENT	TRAINING AFTER INITIAL COURSE	EVALUATION OF SYSTEM PRODUCTIVITY
Austria	75	80	75	80
Belgium	75	50	100	25
France	46	32	88	41
Germany	32	39	43	50
Holland	44	89	33	67
Italy	22	11	38	44
Switzerland	40	40	60	40
United Kingdom	36	54	71	46
Overall	40	46	64	48



C. TRAINING AFTER INITIAL COURSE

- Four countries expressed an interest in this and at a high level--Austria, Belgium, France, the U.K.
- Although most interest was expressed in this training service, in the provision of new facilities care must be taken to ensure that the resource is not too widely spread, at least until the initial revenue and profit figures are established.
- It is apparent that, in all new and high technology fields, training comes high on customers' priority lists and, therefore, revenue should be maximised in this field at an early stage before fringe companies acquire the knowledge.

D. EVALUATION OF SYSTEM PRODUCTIVITY

- Despite the fact that, in customer comment, productivity was mentioned quite frequently, only one country responded at a level of significance--Austria.
- However, it should be noted that Austria gave a high response to all four suggestions, and this might indicate a lack of discrimination as well as a high need.
- It is the view of INPUT that with high-priced capital equipment a business is primarily interested in productivity and return on investment, but one needs to ensure that the correct person in the business is made aware of potential savings.



- Given that there are real productivity gains to be made with specific equipment, the sale of machines with better productivity and the sale of a 'productivity counselling' service should be a prime operation.

CHAPTER XI - CONCLUSIONS AND
RECOMMENDATIONS

XI CONCLUSIONS AND RECOMMENDATIONS

A. USER BASE

- The users surveyed operate in quite a flexible manner, covering a number of business areas in order, no doubt, to keep the overall revenue and profit up.
- However, 48% of the total business areas, with over 90% of the users involved, is in catalogues and magazines.
- Hence, Scitex will need to ensure that the design of scanners and page make-up machines is conducive to flexible production, technical quality, and productivity.
- From the data shown in Exhibit IV-5, it is seen that there is a three- to four-year turnover of machines and that there should be significant new business available within the next two years.
- Over 50% of potential customers are willing to consider a change of supplier for new machines and about 30% are willing to consider a change for upgrades.
- Given that if it were possible to address or satisfy some, if not all, of the current customer worries, then there is ample opportunity to make a sales pitch for new machines and then the service on those machines.

- It is recommended that Scitex concentrate on the more developed countries, i.e., France, Germany, and the U.K., which should give the opportunities and economies of scale.

B. MAINTENANCE

- Nearly 100% of customers were given a warranty with the equipment, mostly lasting at least 12 months.
- Warranty is, in general, a financial issue to the user, who does not want to pay for repair for a 'reasonable' period after the purchase of expensive equipment.
- Where, however, the equipment has a market record for reliability, it may be possible to lead the customer away from over-long warranties (15 months or over). In a related industry one major supplier has been able to reduce the warranty to three months, concurrently selling a discounted maintenance contract.
- Hence, the possibility of selling a reduced price maintenance contract for the first year should be investigated, this having the advantage of getting the customer to sign up at the time of equipment purchase.
- There are approximately 33% of customers without maintenance contracts, and the reasons for this should be determined in order to assess the market-ability of service among these people:
 - Cost.
 - Reliability.
 - Lethargy.

- Moreover, when new equipment is sold Scitex should endeavour to ensure that both equipment and service are sold at the same time.
- As is fairly normal in quite a lot of companies, the respondents did not appear to have a detailed knowledge of the terms and conditions. It is recommended that Scitex put together a minimum set of standard conditions which are beneficial to Scitex and fair to the customer.
- Consequential damages should be excluded or precluded and force majeure definitely included.
- Likewise, a few customers have managed to include penalty clauses, mostly for big systems and mostly with Crosfield, which again suggests that Crosfield has a credibility problem. Penalty clauses should be avoided unless the penalty is extremely minor.
- Relatively few users had their replacement parts covered within the maintenance contract, but there is evidence of a low reliability perception with Crosfield equipment, giving them a need to provide better contracts than Hell.
- The opportunities for Scitex are seen as:
 - Customers are sensitive to new contract cost but relatively insensitive to costs of parts once signed.
 - Wear and tear parts could be offered free within the contract, but other parts charged.
- Most customers expect to pay for expensive items such as disk drives once out of warranty, and it is recommended that Scitex encourage its customers to continue in these expectations.

- Some 77% of users expect the supplier to give unlimited free service calls under the contract, and INPUT believes that these expectations will continue. This is another good reason to ensure that the original equipment has a high MTBF.
- Although only some 45% of users receive a bill for the movement of their systems, it is felt that, generally, customers expect to pay for this, and it is recommended that Scitex make such a charge.
- Some 60% of customers are covered for preventive maintenance within the contract, and this can be a good revenue earner if pitched at the correct pricing level and if, of course, the machine reliability is good.
- From the figures in Exhibit V-9, it is apparent that customers are also sensitive on cash flow, and it is recommended that Scitex prepare an optimized discounted price list for prepayment, based on the expected inflation rate for each country.
- The discounts offered by competitors for users with more than one agreement vary from 5% to 40% but are relatively few in number and apparently the result of hard bargaining by big installations. The recommendation is to have a policy, but to only enter into a bargaining situation when this is absolutely necessary.
- Some 77% of Hell and Crosfield customers have no limit on the number of calls made under the agreement, and there is only a minute percentage that do know of any limitation (3%).
- All other things being equal, Scitex will need to have a similar response and compete on equal terms, or technical superiority, but should also investigate the possibility of selling a graded no-call bonus similar to a no claims discount.

C. MAINTENANCE COVERAGE AND RESPONSE TIMES

- As shown in Exhibit VI-1, the average time required to be covered each day is 16 hours and, as shown in Exhibit VI-5, the response required or expected is anything from 21 to 1.5 hours dependent on country and supplier.
- With the growth of high technology industries and with the high cost of equipment, it is more and more likely that companies will wish to work two- or three-shift systems as a permanent feature.
- The maintenance cost increase can be avoided in part by the in-building of diagnostic routines or expert (predictive) systems for the customers' own use 'out of hours' and the provision, at cost, of a minimum set of wear and tear spares.
- It should be noted that significant coverage is also required over the weekend, and this may afford a market opportunity for a correctly costed 'package'.
- Response times are generally better than expected, but this may be due to a depression of the expectation levels due to past poor performance, and the prime task must still be to get the customer up and running.
- Translated into the country context it can be seen that different countries require or expect quite different levels of response time. Switzerland, for instance, expects a three times faster response than Germany, and Scitex will be able to use these performance requirements to either:
 - Tailor the service to the country and, hence, reduce overall cost.
 - Use better competitive responses in specific countries to capture market share.

- In the case of repair times, as shown in Exhibit VI-5, the performance exceeds the expectations, and this would, therefore, appear to be a real and costly company strategy to please the customer and gain market share.
- The INPUT recommendation is to set up a pilot study, say in Germany where the expectations are lower and where it would be relatively less expensive to set up a given level of service.

D. OVERALL COVERAGE

- In Exhibit II-3 a comparison is made between the figures for customers as a whole as against those with current contracts in the areas of hardware, software, and applications support.
- There is a 16% opportunity to provide hardware and software services to users without current contracts, and a very large opportunity to sell and support applications.
- There are, however, significant country differences when the total customer base is considered. Full result figures are given in Exhibit VII-2. More investigation would be needed to determine if the results are dependent on:
 - Maker strategy.
 - Maker credibility.
 - Country culture.
 - Cost or cash flow.
 - Machine reliability.

- Both Austria and Italy are some 10% down on the average response for software support, while Austria and Germany are some 50% down on average for applications support.
- Italy is phenomenally low, at 9%, on applications support, and this may be either a technology transfer problem or cultural. It should, however, be noted that although Hell and Crosfield supply no applications support whatsoever to the customers surveyed, in the one Dainippon installation support is given.
- In the take-up of software maintenance Crosfield gives a far higher level of on-site and telephone service, but it is not clear whether this is company strategy or a credibility problem. However, Scitex will need to codify its own strategy in this area in order to respond to specific market situations when competing with Hell and Crosfield.
- On the payment for updates to the software the market average is about 70%, and there is no reason why Scitex should not include this in its maintenance contracts and charge for it within that contract.

E. CUSTOMER SATISFACTION

- Within the limits of sampling and statistical error, there is very little difference between Hell and Crosfield in any of the key areas (see Exhibit IX-1).
- Support of applications software is one of the lowest in both cases, but Dainippon scores high. This supports the view that there is a key market opportunity in this area.
- Service engineers' attitude scores high with both the main companies, and it is now quite general for major service operations to include strong training in interpersonal relationships. It is recommended that Scitex keep this as a high priority in order to maximize its opportunities for new business.

- Customers of both Hell and Crosfield questioned the technical ability of the service engineers, and if there is a general problem in obtaining good and well qualified engineers, then alternative strategies should be formulated:
 - Sponsoring training at local colleges.
 - More stringent in-house training.
 - More reliable machines.
 - Better machine in-built diagnostics.
 - Hand-held diagnostic tools.
 - Better customer counselling.
- Additionally, customers felt that more cover was needed 'out of hours', and this is historically an irritant, mainly when machines break down out of hours. It has obvious connotations:
 - Make the machine more reliable.
 - Provide more hours of cover.
 - Lose credibility.
 - Lose market share.
- In looking at the items which users felt were company strengths, reliability and techniques came high on the list. However, it should be remembered that users generally look for certain prime machine and service attributes, either at the time of new purchase or during a period of bad experiences with a current machine. Therefore, the attributes that come out with top scores with supplier-loyal users are the ones in which they are most interested.

- Hence, Scitex should decide what it wishes its market image to be, consistent with good returns, and then concentrate on building that image up to be able to tackle the competitors' strengths.
- In the instances of Hell and Crosfield there would appear to be a choice of direction, reliability, and quality as against productivity and user friendliness, and Scitex will need to formulate the correct strategy to optimize its approach to penetrate the two market/customer bases.

F. SUGGESTED SERVICES

- A detailed breakdown of the responses is given in Exhibit X-1, but essentially the level of interest in a particular subject and in a particular country (except for Austria) is quite low.
- It is recommended that Scitex do either a more detailed survey in Austria to determine the actual facility take-up probability and revenue likely, or they do similar sums to determine the resource needed and the potential revenue and profit for the provision of a follow-up training facility across all countries.
- Training has emerged as a major requirement in all high-technology industries and, given a proper programme, should provide both good revenue and profit.

CHAPTER XII - PRESENTATION SUMMARY



XII PRESENTATION SUMMARY

- Exhibits XII-1 through XII-4 highlight the points that arose from the data collected for this survey, from customer comment, and the analysis put on this latter data by INPUT.
- The data is separated in order to make clear the different areas of opportunity within the Scitex organization and in the marketplace.

EXHIBIT XII-1

WHAT THE CUSTOMER EXPECTS OR WANTS

- **Good Machine Quality**
- **Good Output Quality**
- **Reliable Equipment**
- **Minimum Year's Warranty**
- **Low Downtime**
- **Quick Repairs**
- **Minimum 16-Hour Cover**
- **Weekend Cover**
- **Quicker Spare Parts**
- **Good Service Engineers**
- **Free Service Calls**
- **Lower Maintenance Costs**
- **Better Software Support**
- **More Applications Support**
- **More On-Site Training**



EXHIBIT XII-2

PRODUCT OPPORTUNITIES

- **Quality**
- **Reliability**
- **Serviceability Built-In**
- **Diagnostics Built-In**
- **Output Quality**
- **Technical Capability**
- **Performance Benchmarking**
- **Productivity**
- **Product Cost**
- **Service Cost**
- **Spares Cost**

Design for Quality, Reliability, Service and Profit.



EXHIBIT XII-3

MARKET OPPORTUNITIES

- Each Installation Worth Pounds One Million
- Twenty-three Percent of Machines Replaced Each Year
- Fifty Percent of Users Will Consider New Supplier
- 1988 Could Be a Good Year
- Sign Service on Sale of Machine
- Pressure on Competitors' Service Prices
- Pressure on Competitors' Offerings
- Some Countries Have Different Priorities
- Software Support Packages
- Applications Support Packages
- Post-Installation Training
- Thirty-three Percent of Users with No Maintenance Contract
- Cut Down the T&Cs
- Cut Out the Penalties
- Charges for Movement
- Charges for Expensive Parts
- Differential Response Times



EXHIBIT XII-4

OPPORTUNITIES BY COUNTRY

Austria	Assistance and Personnel System Planning and Management Training after Initial Course Evaluation of System Productivity Technical Assistance Application Support Preventive Maintenance
Belgium	Assistance and Personnel Training after Initial Course Application Support Preventive Maintenance Quicker Response to Calls
France	Training after Initial Course Applications Support Better Manuals Better Software Introduction Better Trained Engineers More Weekend Cover Quicker Response to Calls Better Spare Parts Availability
Germany	Quicker Response to Calls Better Trained Engineers 24-Hour Service Better Spare Parts Availability System Productivity
Holland	System Planning and Management Better Trained Staff Quicker Response

Continued

EXHIBIT XII-4 (Cont.)

OPPORTUNITIES BY COUNTRY

Italy	Lower Cost of Maintenance Better Technical Information Applications Help Quicker Provision of Help and Parts
Switzerland	All Services Could Be Improved Better Trained Engineers
United Kingdom	Training after Initial Course Quicker Software Updates Better Trained Engineers 24-Hour Service and Weekend Cover Lower Maintenance Cost Software Support Better Spare Parts Availability Better Information on Software Development Better Technical Solutions



APPENDIX A - SERVICES AND SATISFACTION
BY COUNTRY

APPENDIX A: SERVICE AND SATISFACTION BY COUNTRY

- Following a presentation made to Scitex in Brussels, further information was requested on a country basis; this information is included in Exhibits A-1 through A-16.
- Caution must be exercised when interpreting the figures given, where the cell size (i.e., number of respondents from a particular country) is very low as a difference of opinion between two respondents in a cell size of two can give very different impressions from the same difference (between the two) in a cell size of ten.
- In these cases it is wise to compare the result with that for the parent population, and if more certainty is required, then more customers must be surveyed.
- Some of the numbers in the appendix may differ slightly from numbers in the body of the report by reason of:
 - Dubious data verified or excluded.
 - Rounding.
 - Averages are not equal to weighted averages.
 - Cell sizes are reduced to the number of respondents having the service being analysed.

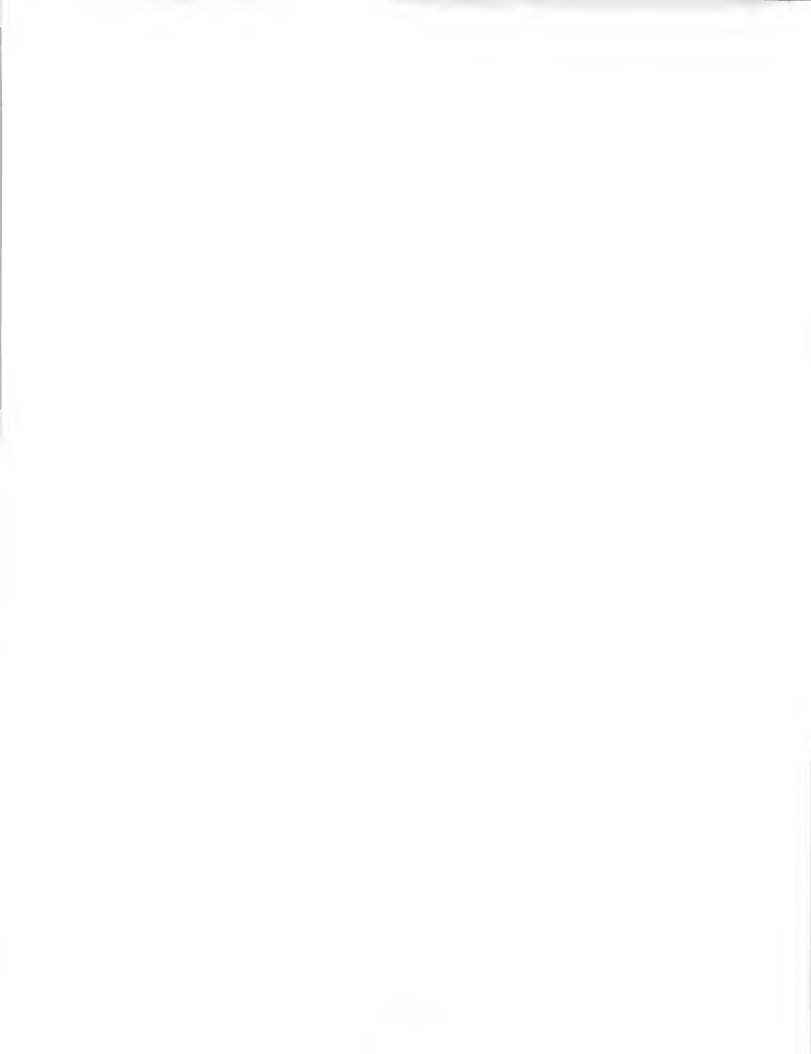


EXHIBIT A-1

MAINTENANCE AGREEMENTS AND WARRANTY
(Percentage of Customers Having)

COUNTRY	HELL		CROSFIELD	
	MAINTENANCE AGREEMENT	WARRANTY	MAINTENANCE AGREEMENT	WARRANTY
Austria	50	100	100	100
Belgium	60	100	-	-
France	100	94	90	100
Germany	76	100	88	100
Holland	100	100	80	100
Italy	86	100	100	100
Switzerland	100	100	100	100
United Kingdom	38	100	56	100

EXHIBIT A-2

PERCENTAGE COST OF MAINTENANCE

COUNTRY	HELL	CROSFIELD
Austria	6.0	7.0
Belgium	6.5	-
France	4.3	6.8
Germany	2.0(3)	4.0
Holland	6.5	6.7
Italy	2.0(3)	3.5
Switzerland	4.5	5.0
United Kingdom	1.5(3)	4.6

Notes: 1. Small cell sizes.

2. Percentage is the ratio of service to
installation costs.

3. May be scanners only.



EXHIBIT A-3

DAYS COVERED BY COMPETITORS
(Percentage of Customers with the Service)

COUNTRY	HELL				CROSFIELD			
	M - F	SAT	SUN	CELL SIZE	M - F	SAT	SUN	CELL SIZE
Austria	100	67	33	3	100	100	100	1
Belgium	80	40	40	5	-	-	-	-
France	100	7	7	15	100	33	11	9
Germany	94	56	44	18	80	60	60	5
Holland	100	50	0	4	100	20	0	5
Italy	86	34	14	7	100	50	50	2
Switzerland	100	100	100	2	100	100	100	3
United Kingdom	100	57	57	7	100	71	65	17

Note: Data from small cell sizes should be treated with caution.



EXHIBIT A-4

RESPONSE TIMES AND SATISFACTION INDEX
 (Times in Hours)

COUNTRY	HELL			CROSFIELD		
	ACCEPTABLE	EXPERIENCED	SAT. INDEX	ACCEPTABLE	EXPERIENCED	SAT. INDEX
Austria	17.0	7.0	2.40	24.0	5.0	4.80
Belgium	4.0	3.0	1.40	-	-	-
France	5.0	6.0	.90	4.0	7.0	.60
Germany	6.0	8.0	.70	21.0	22.0	.90
Holland	4.0	4.0	1.00	4.0	4.0	1.20
Italy	7.0	6.0	1.10	8.0	3.0	2.90
Switzerland	5.0	4.0	1.20	4.0	2.0	1.70
United Kingdom	4.0	3.0	1.20	4.0	6.0	.70
Average	5.6	5.8	.97	6.6	7.6	.88

Rating: 1 and Above = Fully Satisfactory

0.9 and Below = Poor

Note: 1. Main Figures Rounded

2. Satisfaction Index = Acceptable/Experienced (and is exact)

3. One Working Day taken to be 24 Hours



EXHIBIT A-5

REPAIR TIMES AND SATISFACTION INDEX
(Times in Hours)

COUNTRY	HELL			CROSFIELD		
	ACCEPTABLE	EXPERIENCED	SAT. INDEX	ACCEPTABLE	EXPERIENCED	SAT. INDEX
Austria	19.0	25.0	.80	24.0	5.0	4.80
Belgium	8.0	3.0	2.70	-	-	-
France	-	-	-	-	-	-
Germany	17.0	14.0	1.20	17.0	30.0	.60
Holland	.5	4.0	.10	12.0	5.0	2.40
Italy	20.0	16.0	1.25	24.0	20.0	1.20
Switzerland	12.0	84.0	.10	5.0	3.0	2.00
United Kingdom	4.0	8.0	.50	4.0	9.0	.40
Average	13.6	15.4	.88	9.4	12.3	.77

Rating: 1 and Above = Fully Satisfactory

0.9 and Below = Poor

Note: 1. Main Figures Rounded

2. Satisfaction Index = Acceptable/Experienced (and is exact)

3. One Working Day taken to be 24 Hours

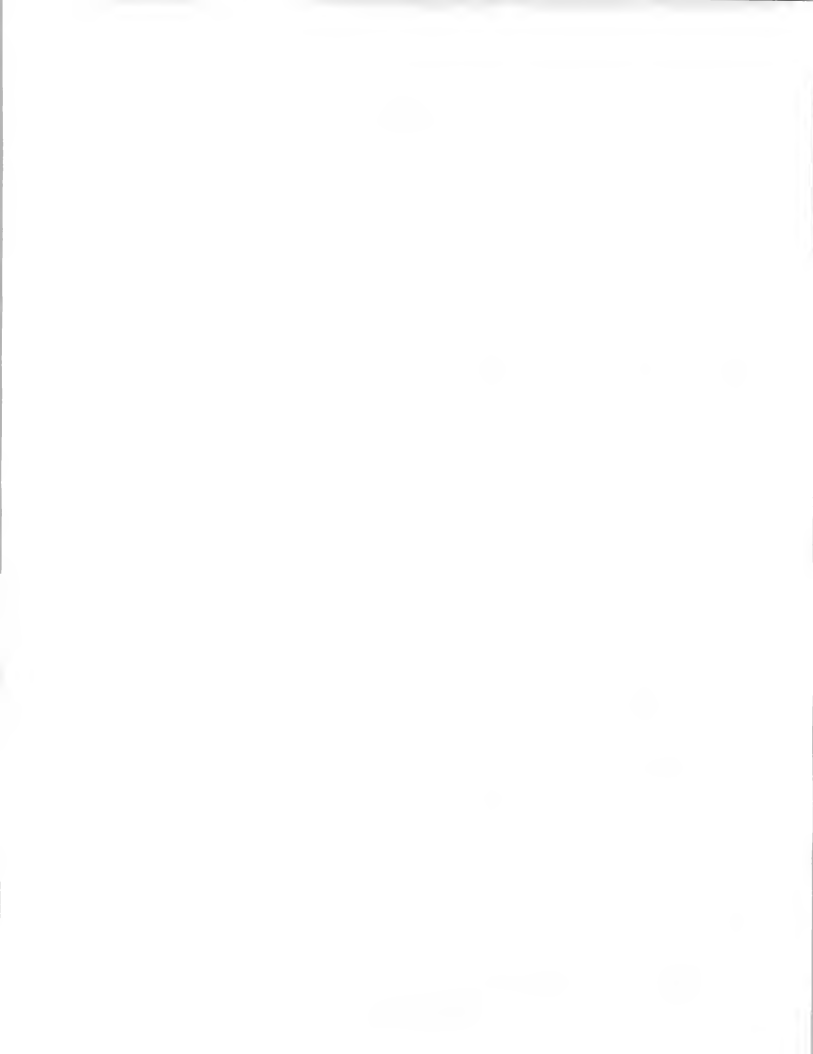


EXHIBIT A-6

SERVICES SUPPLIED BY HELL PERCENTAGE OF CUSTOMERS WITH THE SERVICE INCLUDED IN THE MAINTENANCE CONTRACT

COUNTRY	SW UP	SW	OS	TS	CMS
Austria	67	100	-	-	67
Belgium	60	80	20	20	20
France	60	80	53	47	27
Germany	61	78	28	39	44
Holland	50	75	-	25	50
Italy	57	43	-	29	29
Switzerland	100	100	50	-	50
United Kingdom	71	29	29	14	71

SW UP = Software Updates Included in Maintenance Agreement

SW = Basic Software Service Included

OS = On-Site Response Time Is Defined in Contract

TS = Telephone Response Time Is Defined in Contract

CMS = Charge for Moving the System



EXHIBIT A-6 (Cont.)

SERVICES SUPPLIED BY HELL PERCENTAGE OF CUSTOMERS WITH THE SERVICE INCLUDED IN THE MAINTENANCE CONTRACT

COUNTRY	AD	MO	TE	CO	FO	CO	OT
Austria	6 7	3 3	-	100	3 3	100	-
Belgium	6 0	4 0	-	4 0	2 0	-	-
France	-	1 3	7	7	7	-	-
Germany	3 9	3 9	6	3 9	6	2 2	-
Holland	2 5	7 5	-	7 5	2 5	5 0	2 5
Italy	2 9	4 3	1 4	-	-	-	-
Switzerland	5 0	5 0	5 0	-	-	-	-
United Kingdom	4 3	4 3	2 9	5 7	-	4 3	1 4

AD = Adding More to the System

MO = Modification to the System

TE = Termination Clause

CO = Confidentiality

FO = Force Majeure

CO = Consequential Damages

OT = Other



EXHIBIT A-7

SERVICES SUPPLIED BY CROSFIELD PERCENTAGE OF CUSTOMERS WITH THE SERVICE INCLUDED IN THE MAINTENANCE CONTRACT

COUNTRY	SW UP	SW	OS	TS	CMS
Austria	100	100	-	-	100
France	100	100	89	100	89
Germany	100	100	60	80	80
Holland	100	60	20	20	100
Italy	100	100	100	100	50
Switzerland	100	100	-	33	-
United Kingdom	94	71	53	53	82

SW UP = Software Updates Included In Maintenance Agreement

SW = Basic Software Service Included

OS = On-Site Response Time Is Defined In Contract

TS = Telephone Response Time Is Defined In Contract

CMS = Charge for Moving the System



EXHIBIT A-7 (Cont.)

SERVICES SUPPLIED BY CROSFIELD PERCENTAGE OF CUSTOMERS WITH THE SERVICE INCLUDED IN THE MAINTENANCE CONTRACT

COUNTRY	AD	MO	TE	CO	FO	CO	OT
Austria	100	-	-	100	-	100	-
France	33	78	33	22	22	33	22
Germany	60	40	20	80	-	-	-
Holland	40	40	-	40	-	40	-
Italy	50	100	-	-	-	-	-
Switzerland	67	67	-	67	33	67	-
United Kingdom	18	59	24	71	18	18	-

AD = Adding More to the System

MO = Modification to the System

TE = Termination Clause

CO = Confidentiality

FO = Force Majeure

CO = Consequential Damages

OT = Other



EXHIBIT A-8

INTEREST IN OTHER SERVICES FROM HELL CUSTOMERS (Percentage Interested in Each Country)

COUNTRY	A & P	SP & M	TR	EV
Austria	33	67	33	67
Belgium	80	80	80	80
France	40	28	80	13
Germany	39	39	44	44
Holland	-	75	25	50
Italy	29	-	29	29
Switzerland	-	-	50	-
United Kingdom	43	57	86	43

A & P = Assistance and Personnel Selection

SP & M = System Planning and Management

TR = Training after Initial Course

EV = Evaluation of System Productivity

EXHIBIT A-9

INTEREST IN OTHER SERVICES FROM CROSFIELD CUSTOMERS (Percentage Interested in Each Country)

COUNTRY	A & P	SP & M	TR	EV
Austria	100	100	100	100
France	44	44	89	67
Germany	-	-	20	40
Holland	80	100	40	80
Italy	-	50	-	100
Switzerland	67	67	67	67
United Kingdom	29	53	65	47

A & P = Assistance and Personnel Selection

SP & M = System Planning and Management

TR = Training after Initial Course

EV = Evaluation of System Productivity



EXHIBIT A-10

QUALITY-OF-SERVICE RATINGS FOR HELL

COUNTRY	PER	AVAIL	SEA	SER	SEAE	TR
Austria	8	8	8	8	8	7
Belgium	8	9	9	8	8	8
France	8	7	7	8	8	7
Germany	8	8	8	8	7	8
Holland	9	7	8	7	7	10
Italy	7	6	6	7	8	8
Switzerland	7	8	8	6	8	7
United Kingdom	8	9	9	7	8	8
Average	8	7	8	8	8	8

PER = System Performance

AVAIL = Uptime of System

SEA = Service Engineers' Attitude

SER = Service Engineers' Response Time

SEAE = Service Engineers' Ability and Experience

TR = Telephone Response

Rating: 0 = Appalling, 10 = Excellent.

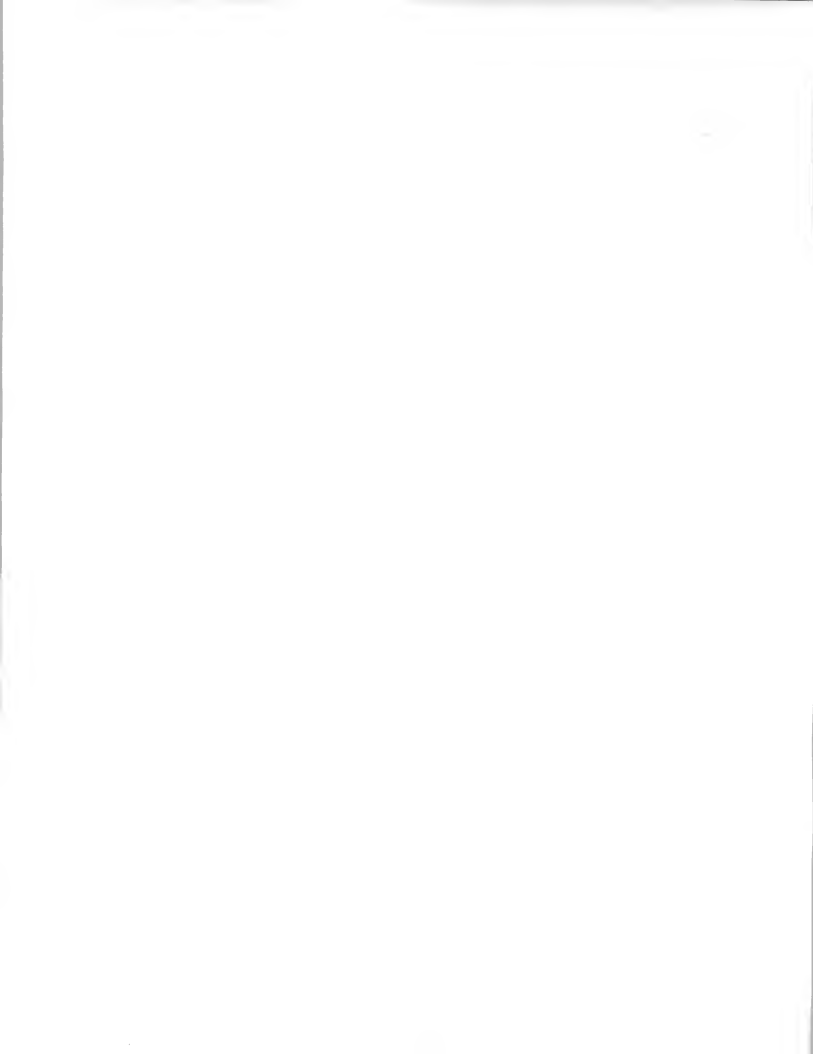


EXHIBIT A-11

QUALITY-OF-SERVICE RATINGS FOR HELL

COUNTRY	SPARES	TQ	DOC	SWS	OVER	COMP
Austria	5	8	6	2	6	6
France	8	5	7	7	8	8
Belgium	7	8	5	7	6	8
Germany	7	8	7	7	7	8
Holland	8	8	5	8	6	8
Italy	7	7	7	7	8	7
Switzerland	7	7	7	7	7	6
United Kingdom	8	7	7	6	7	7
Average	7	7	6	6	7	8

SPARES = Spares Availability

TQ = Quality of Training of Customer Personnel

DOC = Quality of Operator and Technical Manuals

SWS = Applications Engineering Support of Software

OVER = Overall Performance of the Service Organization

COMP = Service Compared to Other Suppliers of Similar Equipment

Rating: 0 = Appalling, 10 = Excellent.

EXHIBIT A-12

QUALITY-OF-SERVICE RATINGS FOR CROSSFIELD

COUNTRY	PER	AVAIL	SEA	SER	SEAE	TR
Austria	8	8	8	6	8	8
France	7	7	7	6	7	7
Germany	8	7	7	6	8	6
Holland	8	9	9	8	8	7
Italy	8	8	7	8	6	8
Switzerland	8	8	8	7	7	9
United Kingdom	7	7	8	6	7	8
Average	7	7	8	7	7	7

PER = System Performance

AVAIL = Uptime of System

SEA = Service Engineers' Attitude

SER = Service Engineers' Response Time

SEAE = Service Engineers' Ability and Experience

TR = Telephone Response

Rating: 0 = Appalling, 10 = Excellent.



EXHIBIT A-13

QUALITY-OF-SERVICE RATINGS FOR CROSFIELD

COUNTRY	SPARES	TQ	DOC	SWS	OVER	COMP
Austria	8	6	8	8	8	8
France	6	7	5	7	6	6
Germany	6	8	5	8	6	7
Holland	5	6	5	5	6	10
Italy	5	7	6	7	7	8
Switzerland	8	4	6	5	6	7
United Kingdom	7	8	8	6	6	7
Total/Average	6	7	6	6	6	7

SPARES = Spares Availability

TQ = Quality of Training of Customer Personnel

DOC = Quality of Operator and Technical Manuals

SWS = Applications Engineering Support of Software

OVER = Overall Performance of the Service Organization

COMP = Service Compared to Other Suppliers of Similar Equipment

Rating: 0 = Appalling, 10 = Excellent.



EXHIBIT A-14

INTENTIONS TO CHANGE OR UPGRADE (Percentage of Customers)

COUNTRY	HELL			CROSFIELD		
	CH	UP	OS?	CH	UP	OS?
Austria	-	100	-	100	-	-
Belgium	20	40	100	-	-	-
France	13	53	40	22	56	22
Germany	6	56	44	-	80	-
Holland	-	25	75	40	-	60
Italy	14	43	14	-	100	-
Switzerland	-	50	-	33	67	33
United Kingdom	14	29	71	24	59	53

CH = Planning to Change the System

UP = Planning to Upgrade the System

OS = Willing to Consider other Supplier



APPENDIX B - SAMPLE QUESTIONNAIRE



APPENDIX B
QUESTIONNAIRE

User Research
Reprographic Systems Europe 1987

Company Name: _____

Address: _____

Telephone Number: _____

Name of Respondent: _____

Position/Title: _____

Interviewer's Name: _____

Date of Interview: _____

Company Information

Primary Business:

___ Newspaper

___ Packaging

___ Catalogue

___ Tradeshop

___ Magazine

___ Other

___ Printer



Good morning/afternoon. I would like to ask you some questions about your:

a. Full colour page make up system

or

b. Colour separation system only (scanner system)

INPUT is conducting a survey to establish user needs for service and support in this market as well as their satisfaction with current service.

As a 'thank you' for your assistance we will send a summary of the survey findings.

1. TYPE OF EQUIPMENT

a. What type of reprographic system do you have?

___ Hell and model(s)? _____

___ Crosfield _____

___ Dainippon _____

___ Scitex _____

b. When was the equipment installed?

Date: _____

c. What is the value of the equipment(s)? _____ Currency: _____

d. Where more than one system only

Since you have _____ (no.) systems/scanners, did you get a discount on the price?

___ Yes - what percent? _____%

___ No

2. MAINTENANCE OF THE SYSTEM

a. Warranty

Did you receive a "warranty" on the system?

___ Yes

___ No

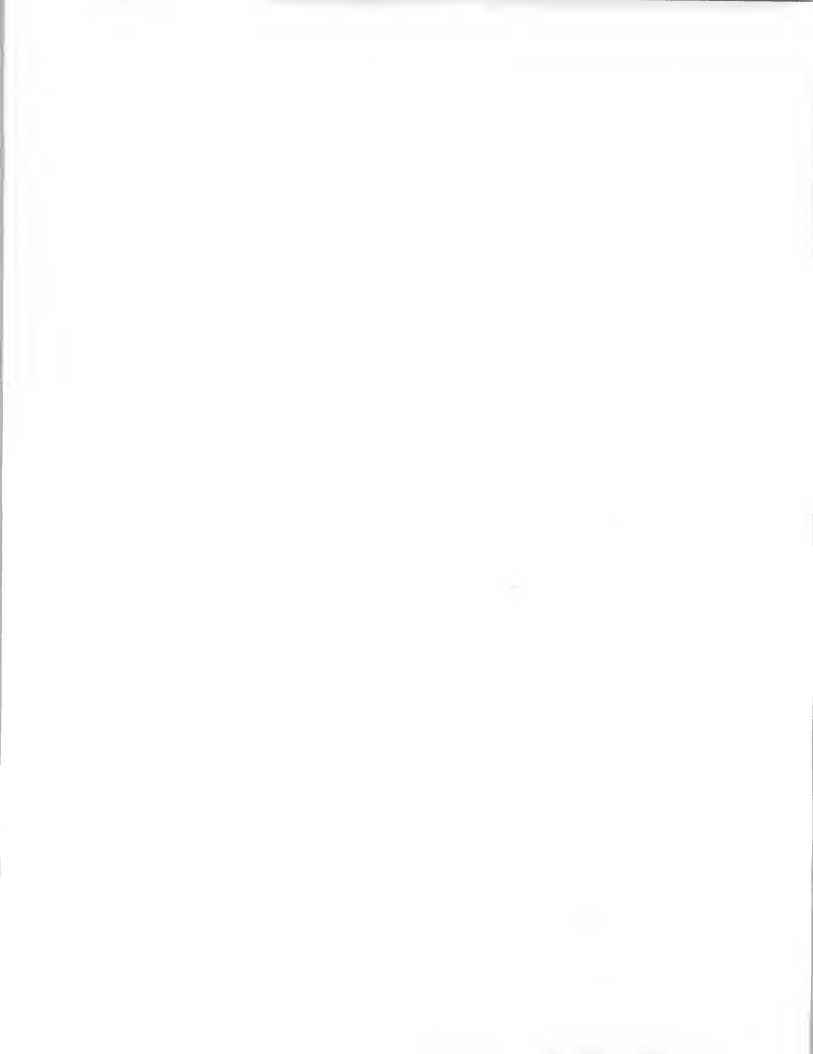
If YES, what is the period of warranty given?

___ 3 months

___ 6 months

___ 12 months

___ Other (please specify) _____



b. Maintenance Agreement

Do you have a "maintenance" agreement?

___ Yes

___ No

If YES, was it signed at the time of purchase of the equipment?

___ Yes

___ No

If not, when was it signed? _____

What is the length of the agreement? _____

What was the cost of the agreement? (please enter as appropriate)

_____ per month

_____ per annum

_____ total paid

Did you get a discount for more than one agreement?

___ Yes

___ No

If YES, what percent? _____ %

What payment terms were there for the settling of the maintenance invoice?

___ 30 Days

___ (prompt payment discount) If yes, specify _____ %

___ Other (please specify) _____

___ (advance payment discount) Please specify _____

Is there an 'indexation' clause in the agreement, if so what?

c. Coverage of the Maintenance Agreement - which periods in the week does your agreement cover?

Monday - Friday ___ Yes ___ No hours covered: _____

Saturday ___ Yes ___ No hours covered: _____

Sunday ___ Yes ___ No hours covered: _____



- d. Does the agreement cover:

Hardware maintenance ☐ Yes ☐ No

Software maintenance ☐ Yes ☐ No

Application Support ☐ Yes ☐ No

- e. Do you have a 'defined' response time in your agreement?

☐ Yes ☐ No

If YES, what is it? _____

- f. Response Time - If we define "hardware response" time as "the time it takes between reporting a fault and the arrival of the service engineer", on average what response time do you feel is acceptable and what do you actually experience, in hours? (8 hours equals one working day)

Acceptable _____ hrs. Experience _____ hrs.

- g. On average, what hardware repair time do you find acceptable and what do you experience?

Acceptable _____ hrs. Experience _____ hrs.

- h. Do you have any "penalty clauses" in the agreement?

☐ Yes ☐ No

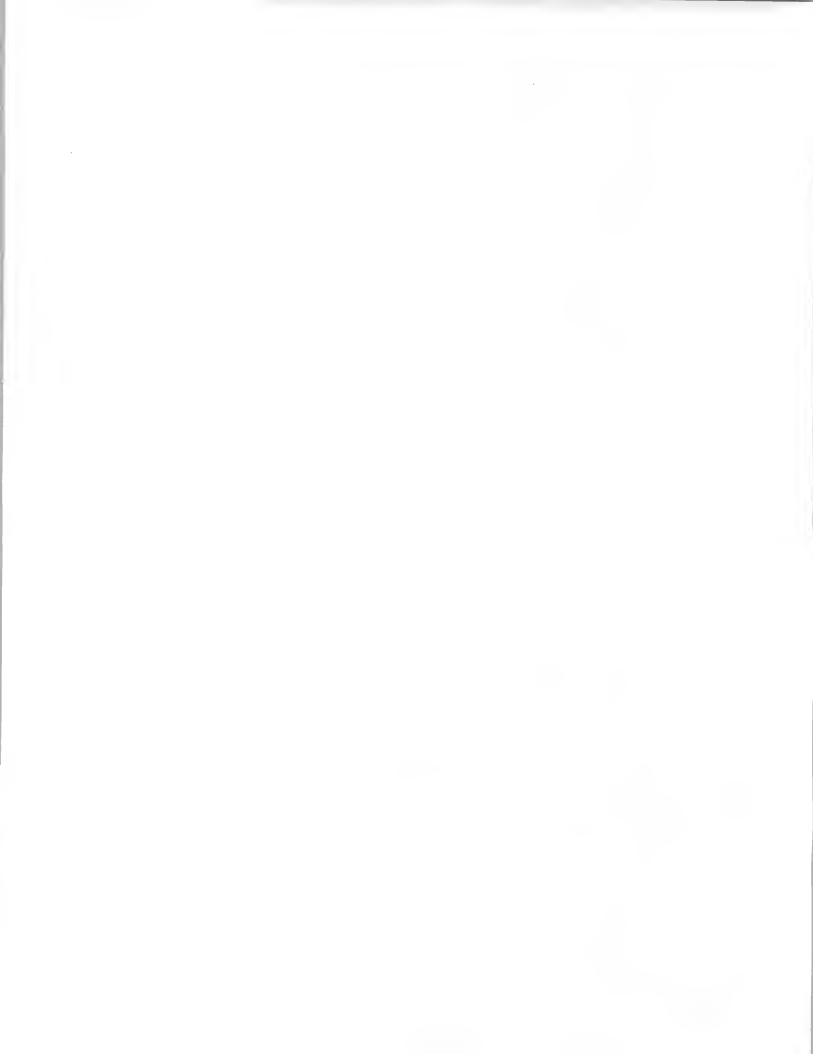
If so, what are they?

(e.g. financial penalty based on poor response time, length of time the system is down, or percent uptime in a period).

- i. Is 'preventive' maintenance covered by the agreement?

☐ Yes ☐ No

If YES, have you experienced this? (State number of visits per annum if applicable).



- j. Software Maintenance - Are software updates covered as part of the agreement?

☐ Yes ☐ No

If YES, is there any extra charge made for this service? (What, e.g. license fee).

And what is covered?

☐ 'Basic' software service. Define _____

☐ 'On-site' - response time _____ hrs.

☐ Telephone service - response time _____ hrs.

☐ New software product information sent?

- k. Parts - Are spare parts included in your agreement?

☐ Yes ☐ No

If YES, is there any limitation on the "value" of parts supplied under the agreement?

- l. Do you have a fixed limit on the number of calls per annum made by your maintenance supplier?

☐ Yes Number of calls = _____

☐ No

- m. Movement of Equipment - Is there a charge for the moving of your system?

☐ Yes ☐ No

If YES, what is the basis for the charge? (Distance moved? Flat fee?)

- n. Does the agreement cover any of the following? (Tick where 'yes')

☐ Adding more to the system _____

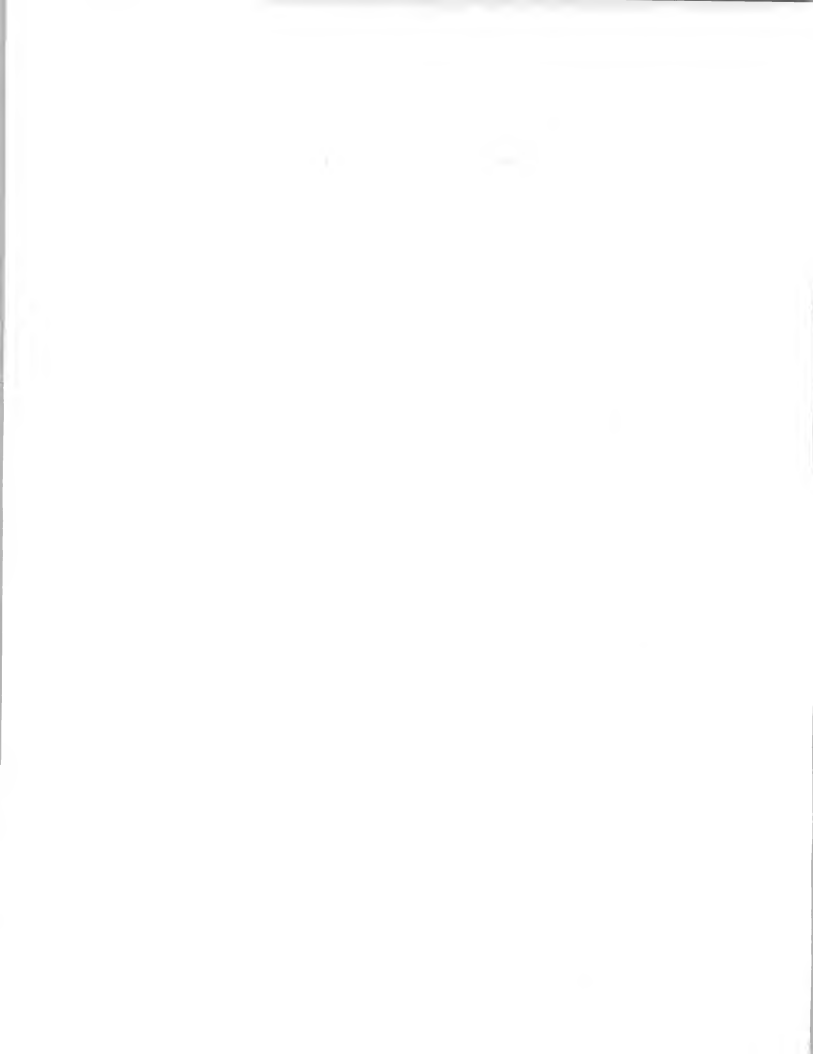
☐ Modification to the system _____

☐ Termination clause _____

☐ Confidentiality _____

☐ Force majeure _____

☐ Consequential damages _____



___ Other

3. QUALITY OF SERVICE

I would like to ask you some questions about the 'quality' of service given. Please respond 'poor', 'fair', 'satisfactory', 'good' or 'excellent' to the following. (Tick as appropriate).

	Poor	Fair	Satisfactory	Good	Excellent
1. Performance of your system	___	___	___	___	___
2. Availability (uptime) of the system	___	___	___	___	___
3. Service engineer's attitude	___	___	___	___	___
4. Service engineer's availability and response time	___	___	___	___	___
5. Service engineer's ability and product competence	___	___	___	___	___
6. Response to telephone inquiries	___	___	___	___	___
7. Spare parts availability	___	___	___	___	___
8. Quality of training of your personnel	___	___	___	___	___
9. Quality of operator and technical manuals	___	___	___	___	___
10. Applications engineering support of software	___	___	___	___	___
11. Overall performance of your service organisation	___	___	___	___	___
12. Service compared to other suppliers of service on similar equipment	___	___	___	___	___

13. Do you have any uncorrected service situations?

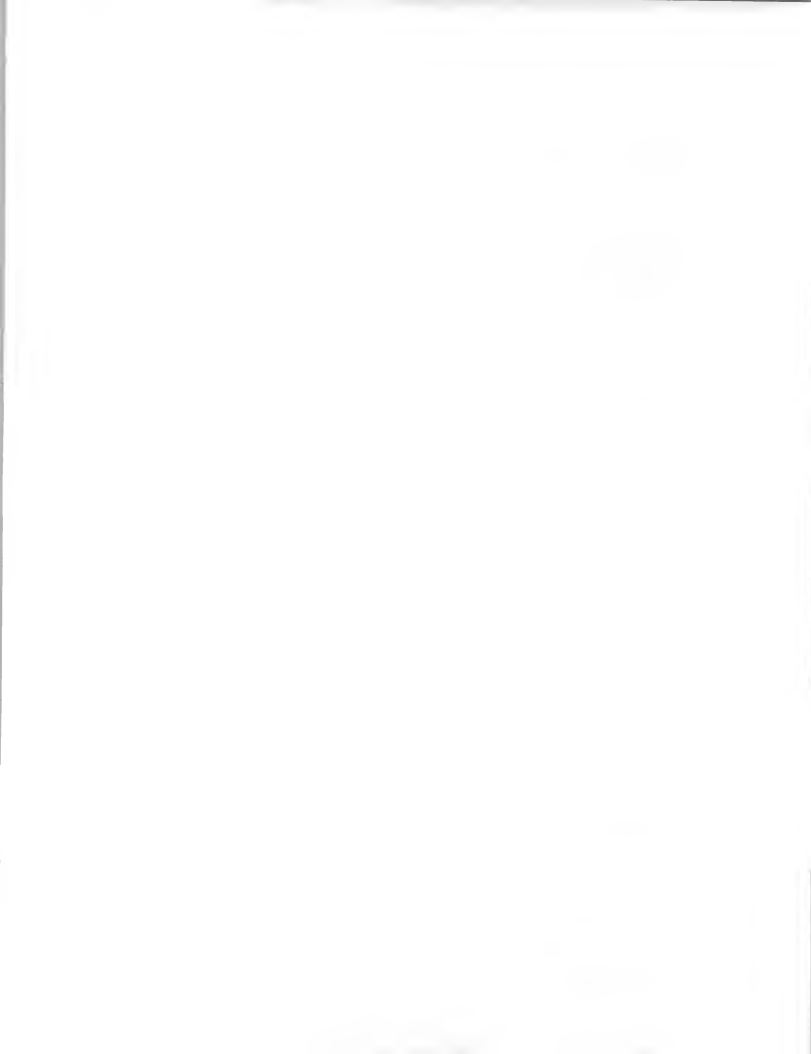
___ Yes ___ No

If YES, please list.

14. Can your supplier do anything to improve its service to you?

___ Yes ___ No

If YES, please specify.



4. OTHER SERVICES

Are there any other services you would like supplied for your system that are not currently offered?
(specify)

If not mentioned, try:

	Yes	Not Interested
• Assistance and personnel selection	_____	_____
• System planning and management	_____	_____
• Training after the initial course	_____	_____
• Evaluation of your system productivity	_____	_____

5. What do you see as the strengths of your current supplier?

6. Any areas of improvement?

7. Are you planning to change/upgrade your system?

___ Change ___ Upgrade

If so, when? _____

If so, would you go for the same supplier?

___ Yes ___ No

and/or consider other suppliers?

___ Yes ___ No



8. Face-to-Face Interviews - Try to obtain a copy of the service agreement.

